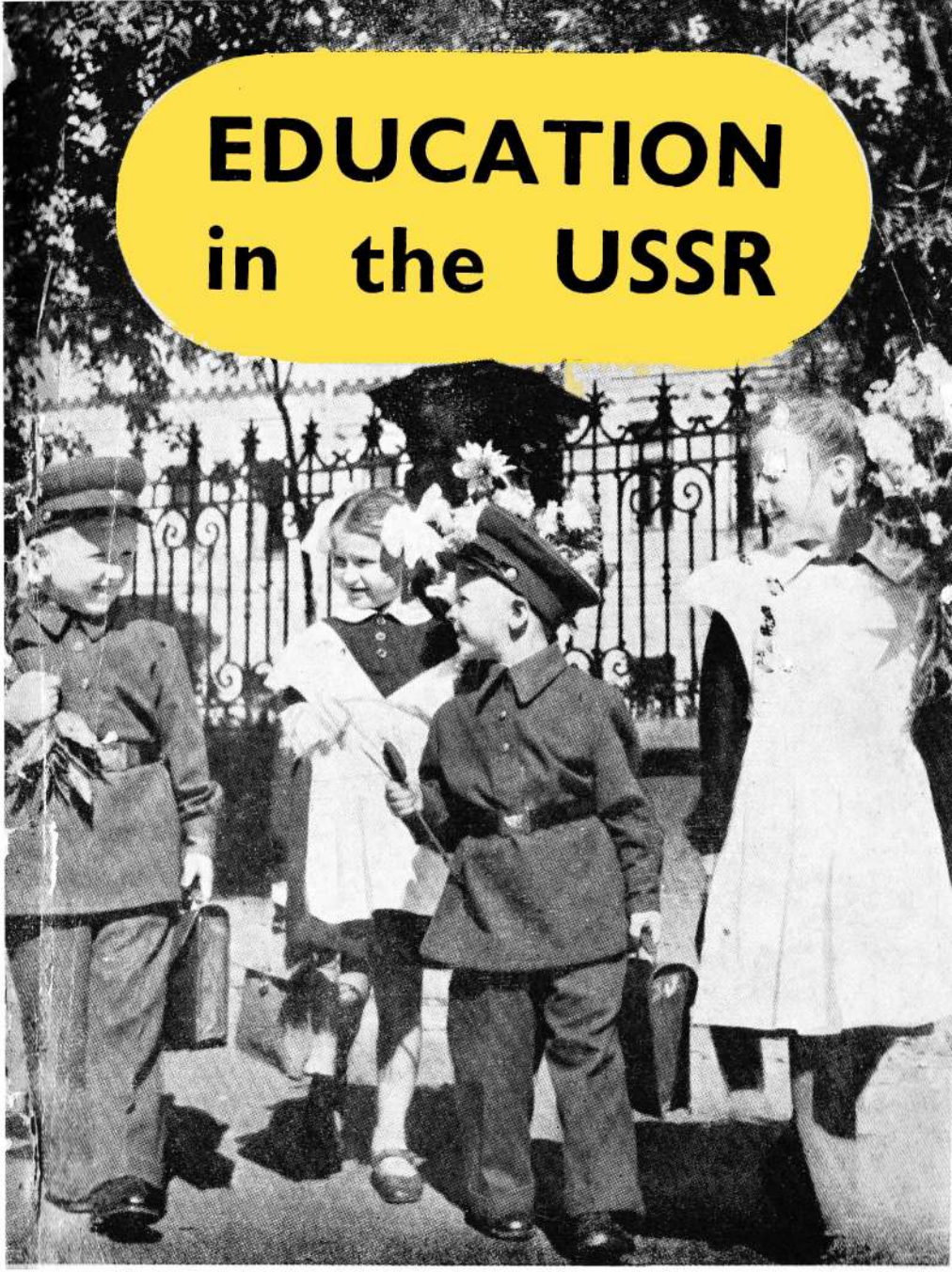
EDUCATION in the USSR



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NEW and UP TO DATE EDITION

EDUCATION
IN THE
U.S.S.R.

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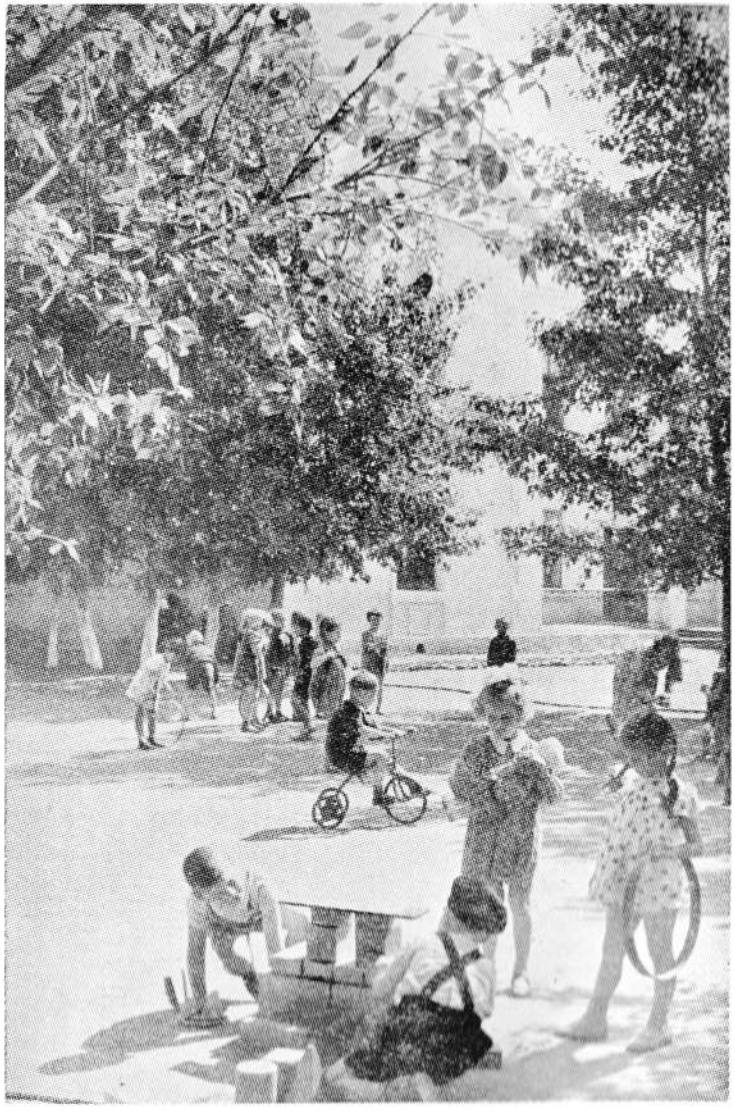


Learning to build!
A scene at a Kindergarten in the city of Rubtsovsk in Altai.

Introduction

PRE-REVOLUTIONARY Russia was a land of profound social contradictions and sharp contrasts. While possessing fabulous natural riches, it was a backward, impoverished land. The countless deposits of coal, metal, oil that were hidden within the bowels of its earth lay there untouched. Although its potentialities for economic growth were tremendous, Russia had a poorly developed industry. The basic branches of its industry: 72 per cent of its metallurgy, 70 per cent of the coal mined in the Donbas, 60 per cent of its oil and 90 per cent of its electrotechnical industry, belonged to foreign monopolies. This virtually made Russia a semi-colonial country dependent on foreign capital, an agrarian raw-material appendage of European capitalism. With tens of millions of hectares of extremely fertile soil, Russia would harvest poor crops. Famine was one of its frequent visitors.

The peoples of Russia were hardworking, yet the productivity of labour in industry in 1913, for instance, was only 11 per cent of what it was in the USA. There were numerous capable scientists and engineers in Russia, people of world fame, but the general scientific-technical level of the industry and agriculture of the country was much beneath that of America and a number of European countries.

An inevitable consequence of Russia's economic weakness was its cultural backwardness. This state was worsened by the fact that tsarism consciously kept the people from acquiring an education, making the latter the monopoly of the nobility, the bourgeoisie and the clergy. The primary school for the masses was separated from the secondary and higher schools, where the children of the propertied classes studied. It was a rare case for a child of the working people to be able to attend the gymnasium and zeal school. Schools for special classes of society, as the lyceum, colleges for the

daughters of the nobility, theological seminaries, diocesan schools, etc., remained in existence until the very October Revolution.

As a result, almost 70 per cent of the men and about 90 per cent of the women of Russia were illiterate. As for the peoples of the so-called outlying districts of Russia, Central Asia, the Northern Caucasus, and others, literate people were the exception to the rule. The policy of Russification pursued by the autocracy was such that many peoples inhabiting the country had no written language of their own. It was not only the Far North which was deprived of all rights in the matter of education, but even the Ukrainians, Byelorussians, Letts, Lithuanians, Estonians and many other nationalities were not permitted and had no opportunity to have schools where instruction was conducted in their native tongues. The network of confessional schools, as the parochial schools, the Moslem primary and higher theological schools, merely served as an instrument for the autocracy and church with which to bring up the masses in the spirit of obedience to the "powers that be." In 1913 Lenin wrote that there was no other country left in Europe, except Russia, in which the masses of the people were so despoiled of education, light and knowledge...

The October Socialist Revolution paved the way for the eradication of antagonistic social contradictions and made all the sources of knowledge available to the working people. Among the most important achievements of Soviet society during the past four decades are those in the field of public education.

The things that had to be done included: The creation of pre-school institutions almost from their foundations, the organization of the upbringing of the younger children in them and the radical reorganization of schools of all types, primary, secondary and higher. It was also necessary to raise the cultural level of the people and, first of all, to eradicate mass illiteracy, that grievous heritage of the past.

System of Public Education

THE principles underlying the system of public education in the USSR were outlined soon after the October Revolution in a decree issued by the All-Russian Central Executive Committee dated October 16, 1918 : "Statute Concerning the Unified Labour School of the Russian Union Federative Soviet Republic." This decree established the democratic basis for public education. A unified labour school with nine years of instruction, for pupils from 8 to 17 years of age, and divided into two stages, the first and second, was organized for all strata of the population.

Free, general and polytechnic education for both sexes up to the age of 17, the complete realization of the principle of a unified labour school in which instruction was conducted in the native languages, an unconditional secular school which would be closely connected with social and productive labour, the development of professional education, the wide access to the higher schools for all desiring to study and, first of all, for workers—these formed the basis for the system of public education in the USSR. And as the country grew economically and culturally, as it developed and improved, the types and structure of the schools changed as well as the period of instruction, the concrete forms of the ties and succession of general, polytechnic and professional education. However, the underlying principles remained unchanged, namely : the democratic nature of the school in all its stages, from primary to higher ; the ties existing between all schools and construction for economic and cultural purposes ; the state character of public education, which excludes private schools ; secular education and upbringing in all their stages ; the equal rights of all the peoples of the USSR as regards receiving an education ; instruction in their native languages ; the equal rights of men and women as regards receiving an education ; the principle of unification and sequence in various institutions for bringing up and educating the children.

The system of public education includes various pre-school institutions, many types of general-educational schools, secondary and higher special educational establishments, and diverse cultural and other educational institutions.

Pre-school institutions see to the public education of children of the ages 3-7 in kindergartens, children's playgrounds and children's homes.

General-educational schools provide a general and polytechnic education and rear children of the ages 7-17 ;

(a) The primary school—children of the ages 7-10 ;

(b) The seven-year school—children of the ages 7-13 ;

(c) The secondary school—children of the ages 7-17 ;

(d) Special schools for the blind, deaf-mutes and mentally backward children ;

(e) Suvorov and Nakhimov schools :

(f) Music, choreographic and other schools for children especially gifted in one or another field of art.

The *seven-year and secondary school for working youth* gives a general and polytechnic education to young workers and office employees who are engaged in industry and who did not receive a secondary-school education in their day.

The *seven-year and secondary school for rural youth* gives a general and polytechnic education to peasants who likewise had failed to receive a secondary-school education.

Children's extra-mural institutions : clubs, Pioneer Homes and Palaces, children's technical and other centres, etc.

Professional schools train skilled workers and specialists of secondary-school qualifications :

(a) Trade, railway, art-crafts and mining schools in which the term of instruction is from 2 to 4 years, for the training of skilled workers, and factory training schools where the course of instruction is from 6 months to 1 year, to train workers with qualifications for trades in great demand. Those who have finished the seven-year general educational school are accepted in these schools.

(b) technical schools where the course of instruction is from 1 to 1½ years, to train highly skilled workers and junior technical personnel. Those who have finished the secondary general-educational school (the 10 year-school) are accepted here.

(c) specialized technical schools, medical schools, teachers' training schools, music, drama and other schools to train specialists of secondary-school qualifications. The course of instruction in these schools is four years for pupils with a seven-year general education, and from 2 to 2½ years for those who have finished the secondary or 10-years-school.

The *higher school with the course of instruction from 5 to 6 years:* (a) universities which train specialists for diverse branches of science, as mathematics, physics, mechanics, chemistry, law, philology, journalism, history, philosophy, etc ;

(b) the Academies—agricultural, veterinary and others;

(c) technical, agricultural, economic, pedagogical, medical and other colleges which train specialists of higher qualifications for various branches of the national economy and cultural activities ;

(d) conservatories, architectural, art, and other colleges for training specialists of higher skills in the field of art.

Cultural and educational institutions for adults. The diversity of the forms, types, sorts of educational institutions reflects, on the one hand, the diversity of the national-economic and cultural needs of Soviet society and, on the other, meets the individual wishes, tendencies and abilities of the growing generation.

The administration of the general educational school, the primary, seven-year and ten-year schools, comes within the jurisdiction of the ministries of education of the Union Republics (15 ministries as there are 15 Union Republics), the ministries of education of the autonomous republics and of the territorial and regional departments of public education.

The Ministry of Higher Education of the USSR is at the head of professional secondary and higher education. Some republics, as the Ukrainian SSR, where there are a large number of higher educational institutions, have their own republican ministries of higher education.

The trade, railway and other institutions in which professional education is of a more primary nature come within the jurisdiction of the Chief Administration of the Republican and Regional Administrations of the Labour Reserves. The activity of cultural and educational institutions is directed by the Ministry of Culture of the USSR and the Ministries of Culture of the Union Republics.

Pre-School Upbringing

IN PRE-REVOLUTIONARY Russia public pre-school up-bringing was in an embryonic state. In 1914 the entire country had only 275 pre-school institutions, of which 150 were of the type of kindergartens that accommodated 4,000 children in all. The tsarist government not only did not help these pre-school institutions to develop but was extremely suspicious of the attempts of progressive teachers to draw public attention to them.

After October 1917 pre-school upbringing ceased to be the concern of private individuals and philanthropic institutions.

In the period from 1918 to 1940 about 24,000 kindergartens were organized in the USSR. In 1940 they took care of 1,171,507 children. The war of 1941-1945 somewhat retarded the development of pre-school upbringing, but even then considerable allocations were made for this purpose.

The period following the war saw the further development of these pre-school institutions. In 1955 there were 31,596 kindergartens which reared 1,731,000 children and 27,267 children's playgrounds which served over 970,000 children. In 1956 the number of children in the kindergartens increased to 1,870,000.

Pre-school institutions are organized by the departments of public education, factories and plants, Soviet institutions and collective farms. The organization of kindergartens by private individuals is not permitted.

The work of the pre-school institutions is adapted to the needs of working women, their working conditions, and the specific features of their living conditions and national development.

The kindergarten takes care of children of the ages 3-7, looks after their health and their mental and physical development, and lays the foundations for their moral and artistic upbringing. At the kindergarten the youngsters are divided

into three age groups, the youngest, middle and oldest. The length of time the children spend in the kindergarten each day depends upon the working and living conditions of the parents. Usually it is 9-10 hours. There are also some groups which remain at the kindergarten the entire day, from Monday until Saturday evening, going home only for the week-end. And there are also kindergartens of the sanatorium type.

The aim of the educational work and care of the children in the kindergartens is to instill in them a collective spirit, teach them to play together, to do things together, and help one another perform simple tasks. Thus the children's collective becomes that social milieu in which their abilities and inclinations are developed.

The kindergarten teachers visit the homes of the children, speak with their parents, organize consultation hours for them, and hold group and general parent meetings.

During the summer numerous children's playgrounds are opened up in the cities and especially in rural localities. Educational work there is conducted on the same pedagogical principles as in the kindergartens.

The personnel for children's pre-school institutions receive their training in special departments of teachers' training schools and teachers' colleges.

Scientific research work on questions concerning pre-school upbringing is conducted by the faculties of pre-school pedagogy at the pedagogical institutes, by scientific research institutes of the Academy of Educational Sciences of the RSFSR, and by scientific-pedagogical institutions of the ministries of education of the Union republics.

The General Educational School

THE school network inherited by the Soviet Republic from the old regime was poorly developed. In the 1914-1915 school year Russia had a total of 105,524 schools, of which 101,917 were primary schools, 1,654—seven-year schools, and 1,953—secondary schools. The course of study in the primary school was, as a rule, only three years. However, the overwhelming majority of pupils did not finish even the primary schools, most of them studying only one or two years.

In the years 1914-1915 the total number of pupils in all the schools of Russia numbered only 7,896,000 children and youth, of which number 7,030,200 attended the primary schools. This was about one-fifth of the number of children of the school ages 8-17, and 51 per cent of those of the ages 8—11.

While carrying out the plan for the socialist industrialization of the country and the collectivization of agriculture the Soviet people also solved, simultaneously, the tasks of the cultural revolution. By 1930 the ground had been prepared for the transition to universal, compulsory elementary education. I shall give just a few tables showing the development of public education in the USSR.

	School-Year			
	1928-1929	1929-1930	1930-1931	1931-1932
Number of pupils in the primary, seven-year and secondary schools (in millions)	12.1	13.5	17.6	20.9
In towns	3.4	3.6	3.8	4.6
In rural localities	8.7	9.9	13.8	16.3

The tsarist officials figured that it would require 100-150 years to effect universal primary education. The Soviet authorities solved this task in less than 10 years.

In the period from 1934 to 1941 another important step was taken in effecting universal seven-year education and towards the transition to universal secondary education.

	School Year	
	1933-1934	1940-1941
Number of schools of all types	166,468	191,545
Of this number :		
Primary schools	133,883	125,894
Seven-year schools	28,646	45,745
Secondary schools	2,436	18,811
Others	1,503	1,095

The number of seven-year schools increased over 1.5 times and the number of secondary schools—almost 8 times.

The number of pupils also increased considerably during the given period :

	School Year	
	1933-1934	1940-1941
Number of pupils in schools (in millions)	22,096	34,784
Of this number,		
In primary schools	11,810	9,786
In 7-year schools	8,150	12,525
In secondary schools	2,012	12,199
In other schools	124	274

The war interrupted the further development of universal seven-year and secondary education. The number of such schools was decreased. The number of pupils also decreased, especially in the secondary schools (by more than half). However, the achievements attained in universal primary education were fully retained even during the difficult period of the war.

The following figures show the development of public education in the period following the termination of the war :

	School Year		
	1945-46	1950-51	1955-56
Number of Schools of all types	186,853	201,628	195,271
Of this number :			
Primary schools	131,625	126,426	108,756
7-year schools	41,687	59,640	58,739
Secondary schools	12,836	14,961	26,863
Other schools	705	601	913

Universal seven-year education went into effect in the main in 1951.

The organs of public education were faced with new tasks : to affect universal secondary education in the main, in town and the countryside by means of instruction of children and the youth in secondary general educational schools (10-year schools) and in specialized secondary schools.

The number of pupils in the 1956-1957 school year was 30 million, or almost four million more than in the 1945-1946 school year. But, whereas the number of pupils as a whole increased, the number in the 1st-4th forms decreased as a result of the decrease in the number of children born during the war years. The number of pupils in the 5th-7th forms almost doubled, while the number of pupils in the 8th-10th forms increased over 5 times. For the same reason similar changes took place in the number of schools of various types, which is reflected in the table given above.

Content of education. The curriculum of the Soviet school provides for both a general and polytechnic education, and the moral, physical and aesthetic upbringing of the pupils.

The aim of the general education is to give the young generation a knowledge of the fundamentals of nature, society and man's thinking process.

Their polytechnic education acquaints the pupils with the theoretical and practical aspects of the most important branches of industry and agriculture. It is closely connected with their general education and the fundamentals of sciences, especially of physics, chemistry, biology, geography, mathematics and drafting. At the same time, their polytechnic instruction influences the nature and trend of their general education, giving it a more vital character and associating it with man's basic activity, material production.

Much attention is paid by the Soviet school to developing in the pupils an ability to acquire knowledge independently and to apply it in their work, an ability to make observations, to understand and analyze what they see, to develop their creative imagination, think logically, and work inde-

pendently over one or another book, conduct experiments, perform some labour assignment, etc.

The curriculum, as well as their courses of study and textbooks concretely outline the contents of their general and polytechnic education.

Curriculum for the Primary, 7-year and Secondary Schools

No. Subject	Number of Hours per Week per Form										Total Number of hours per	
	1	2	3	4	5	6	7	8	9	10	Week	Year
1. Russian language and literature	13	13	13	9	9	8	6	6/5	4	4	84.5	2,788
2. Mathematics	6	6	6	6	6	6	6	6	6	6	60.0	1,980
3. History	—	—	—	2	2	2	2	4	4	4	20.0	660
4. Constitution of USSR	—	—	—	—	—	—	—	—	—	1	1.0	33
5. Geography	—	—	—	2	3	2	2	2/3	3	—	14.5	479
6. Biology	—	—	—	2	2	2	3	2	1	—	12.0	396
7. Physics	—	—	—	—	—	2	3	3	4	5/4	16.5	544
8. Astronomy	—	—	—	—	—	—	—	—	—	1	1.0	33
9. Chemistry	—	—	—	—	—	—	2	2	3	3/4	10.5	347
10. Psychology	—	—	—	—	—	—	—	—	—	1	1.0	33
11. Foreign Language	—	—	—	—	4	4	3	3	3	3	20.0	660
12. Physical Culture	2	2	2	2	2	2	2	2	2	2	20.0	660
13. Drawing	1	1	1	1	1	1	—	—	—	—	6.0	198
14. Drafting	—	—	—	—	—	—	1	1	1	1	4.0	132
15. Singing	1	1	1	1	1	1	—	—	—	—	6.0	198
16. Work and Practical studies	1	1	1	1	2	2	2	—	—	—	10.0	330
17. Practice in agriculture, machine-study and electro-technique	—	—	—	—	—	—	—	2	2	2	6.0	198
Excursions												188
Total	24	24	24	26	32	32	32	33	33	33	293.0	9,857

As can be seen from above, considerable time is devoted to a study of the native language and literature, the social sciences, as history, the constitution, economic geography and the fundamentals of the natural sciences, as physics, astronomy, chemistry, biology, physical geography. Special

subjects have been introduced, as work and the fundamentals of production. The curriculum also includes lessons in drafting, which is of great importance for a polytechnic education. Drawing and singing lessons make it possible to study the elements of art.

These principles also underlie the curricula of the schools in the national republics and regions of the USSR. However, the curricula of the non-Russian schools of the RSFSR and the Union republics have their own specific features. They provide for a study of the native language and literature, the most important events in the history of a given people and the geography of their republic. The Russian language, as the common language for communication among the peoples of the USSR, is studied in all national schools.

The extent of the knowledge taught in each particular subject and the connection among the various school subjects is determined by the course of study.

The course of study for the first four forms of the general-educational school contains the primary elements of the general education and also the rudiments of work habits. The pupils of the primary forms master the elementary knowledge of the structure of their native tongue and learn how to read and write. In the 1st-4th forms instruction in the study of their native language is, for the most part, of a practical nature and is closely connected with the actual conceptions of the pupils concerning life about them.

In the 1st-4th forms the primary course of study in arithmetic is confined to whole numbers. Much time is devoted to the solving of problems. The pupils of the 1st-3rd forms are given a concrete idea and the simplest conceptions about nature during their lessons in explanatory reading, and those of the 4th form—during their natural science lessons. Likewise, in the 1st-3rd forms they are given an elementary knowledge of their country, of the past and the present of the USSR, during the explanatory reading lessons, and in the 4th form—in their history and geography lessons.

Listening to something highly interesting!

The pupils of the primary forms receive an elementary knowledge, skills and habits of a polytechnic nature when performing work assignments in their work-rooms, nature corners, and on the school grounds, during which they make articles of paper, cardboard, tin, make the simplest collections and herbariums and look after plants and animals. In the initial stage of their schooling special attention is paid to the physical and aesthetic upbringing of the children.

Regular courses of instruction in general-educational subjects are given in the 5th-7th forms of the 7-year school and in the 10-year school. These subjects include mathematics, physics, chemistry, biology and history. In these

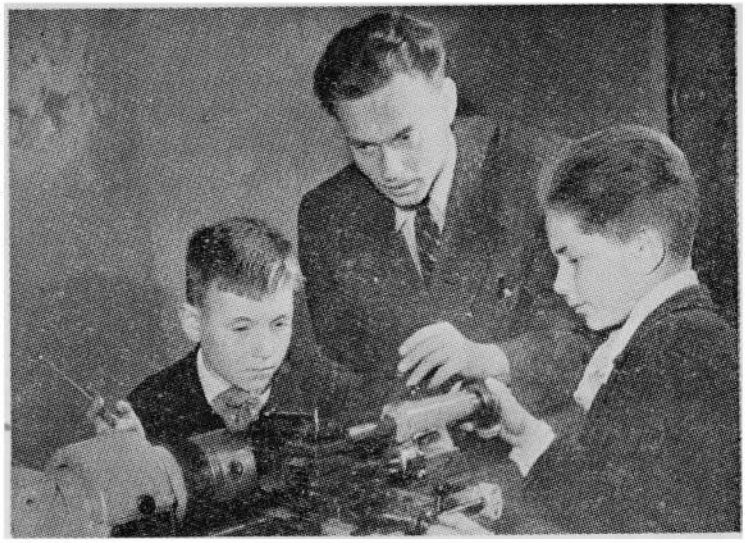
forms, too, the degree of independent work on the part of the pupils increases, and logical argumentation and the ability to prove their point when explaining new material are developed. But even in this stage of their studies, factual, experimental and, to a considerable extent, descriptive material predominates.

In the 8th-10th forms the pupils master the system of scientific views on the phenomena of nature and society. The courses of study contain rather broad theoretical generalizations. The pupils become acquainted with the history of the birth and development of their native literature, with the works of world literature and are taught the basic facts concerning the theory of literature. During their study of history they come to understand the motive forces in the

A mother helps the child in her home-work.

development of society. The course in mathematics, (algebra, geometry and trigonometry) is founded on a logical basis and provides the prerequisites for the further study of special mathematical subjects in the higher shool. In the 8th-10th forms the pupils study physics more profoundly than in the 6th-7th forms, and master the essence of physical phenomena, as the laws of mechanics, sound, electricity and optics ; they come to understand the most important theories in the field of physics, as the molecular-kinetic theory of the structure of substances, the electronic theory, the wave theory of light, etc. When taking up chemistry the pupils learn the laws of the qualitative changes of substances and the uniformity of the structure of the material world. The study of biology acquaints them with the activity of the organism, with the anatomy and physiology of man, the history of the development of the organic world, the theoretical

Looking at a picture-book are the first-graders of a village school of a collective farm in the Turkmen SSR.



Polytechnical training is part of instruction at secondary schools.

principles of Michurin's teachings, and the theory of the origin of man.

While studying physics, chemistry, biology, mathematics, drafting and also the fundamentals of production and during their industrial practical work the pupils become acquainted with scientific-technical principles of production, learn how to use measuring instruments, apparatus and laboratory equipment and to perform the simplest assembly work in electro—and radio—techniques, they also learn how to make and read the simplest drafts, perform a number of agricultural tasks, as the growing of plants, care of animals, and maintenance of agricultural machinery. They also become acquainted with the chief methods of obtaining electrical, thermal and mechanical energy, the most important chemical substances and their application in industry and agriculture.

Chemistry practical at a secondary school in Uzhgorod, Ukrainian SSR.

The study of civic history and the Constitution of the USSR, as subjects in the course of study, plays an important part in instilling in the pupils a feeling of patriotism and an appreciation of the friendship of the peoples. The aim of instruction in history in the Soviet school is to acquaint the pupils with the trend of development of human society as a unified logical process and with the most important events in their native and world history.

Ancient history is taught in the 5th-6th forms, mediaval history in the 6th-7th forms, modern history in the 8th-9th forms and the history of the USSR in the 8th-10th forms.

During such instruction, chief attention is paid to the role of the people in the historical process. However, the role of individuals in history is not ignored, but is shown in its close connection with the decisive role of the masses.

The basic task in the teaching of the Constitution of the USSR is to give the pupils an understanding of the foundations of the Soviet system and the socialist state. The teaching of the Constitution of the USSR also helps to bring up the pupils in the spirit of socialist democracy and instills a respect for Soviet laws.

During their study of geography the pupils are given a systematized knowledge of the nature, population and economy of the USSR and other lands.

In the 5th form the pupils are given a primary course of

Geography students are compiling and editing maps at the examination.

study of physical geography ; in the 6th — a physico-geographical survey of the parts of the world.

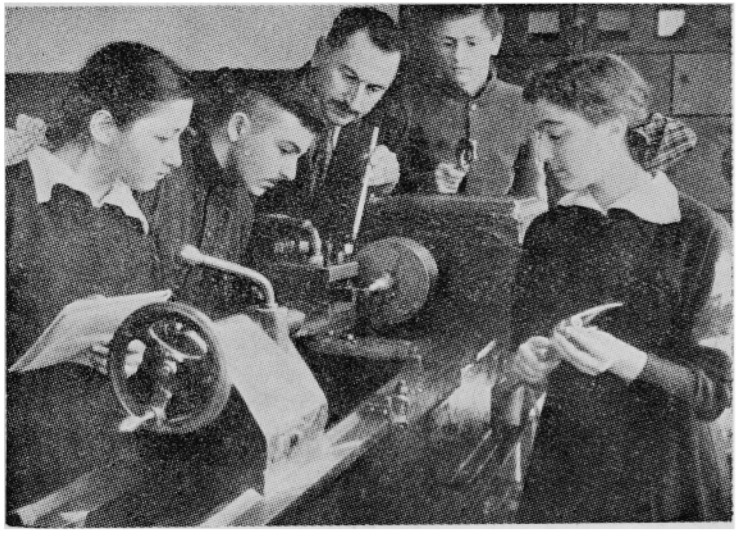
The physical geography of the USSR is taught in the 7th form.

The economic geography of the USSR and of other lands is taught in the 8th-9th forms.

The study of the economic geography of the USSR acquaints the pupils with the productive activity of the peoples of the country under definite geographic conditions, the geographic distribution of raw materials, the various branches of industry and the organization of the national economy of the USSR.

The study of the economic geography of foreign lands tells the students of the economy of these individual countries, the distribution of raw materials on their territory, their branches of industry, etc.

Explaining the working of a lathe to the eighth-form students of a public school in Soviet Georgia.



The study of the principles of the natural and social sciences helps the students of the upper forms to understand the ideas of the materiality of the objective world, the laws governing the development of nature and society, and lays the foundations for a scientific, materialistic world outlook.

Soviet teachers are interested in helping their pupils to acquire a conscious, creative understanding of the collective experience of mankind, which is generalized in the foundations of the sciences. Only in this way their instruction will be truly and highly effective.

Polytechnical instruction in the general-educational school solves a large number of educational tasks. It acquaints the young people with the phenomena and laws of nature, with the laws of society which form the basis of material production, and with the general scientific principles of production, using as its basis the most important branches. It also contributes to the development of scientific-technical thinking. Polytechnic instruction gives the pupils an ability to handle the most widespread instruments of work, inculcates in them abilities and readiness for work in industry, develops in them a power of endurance and various skills, teaches them to work efficiently, and helps them in a conscious choice of profession.

This not only explains why new subjects are now introduced, such as give them an understanding of the fundamentals of industry, but also why schoolchildren are systematically acquainted with methods of work at enterprises, at collective and state farms, on experimental grounds and in the school workshops. The aim of all this work is that when the young men and women have finished the 10-year school they should have a good general education which will enable them to enter college and at the same time they will be prepared for practical activity.

In order to accomplish these tasks most effectively the Ministry of Education of the RSFSR has drawn up a new curriculum which it has tested in 500 schools.

Curriculum of the Secondary School

(to be tested in schools specified by the Ministries of Education of the autonomous republics, regional, territorial and city departments of public education)

No.	Subject	Number of hours per week per form										Total number of hours per	
		1	2	3	4	5	6	7	8	9	10	Week	Year
1.	Russian language and literature	13	13	13	9	9	8	6	5	4	4	84	2,856
2.	Mathematics	6	6	6	6	6	6	6	6	6	6/5	59.5	2,023
3.	History	—	—	—	2	2	2	2	4/3	3/4	4/5	19.5	666
4.	Geography	—	—	—	2	3	2	2	2	3	—	14	476
5.	Biology	—	—	—	2	2	2	3	2	1	—	12	408
6.	Physics	—	—	—	—	—	2	3	3	4/3	4	15.5	527
7.	Astronomy	—	—	—	—	—	—	—	—	—	1	1	34
8.	Chemistry	—	—	—	—	—	—	2	2	2	4	10	340
9.	Foreign Language	—	—	—	4	4	3	3	3	3	3	20	680
10.	Physical Culture	2	2	2	2	2	2	2	3	3	3	23	782
11.	Drawing	1	1	1	1	1	1	—	—	—	—	6	204
12.	Drafting	—	—	—	—	—	—	1	1	1	1	4	136
13.	Singing	1	1	1	1	1	1	—	—	—	—	6	204
14.	Work and Practical studies	1	1	2	2	2	2	2	—	—	—	12	408
15.	Fundamentals of production	—	—	—	—	—	—	—	3/4	4	4	11.5	391
16.	Performing of seasonal (spring and autumn) work on experimental grounds and excursions												191
Total		24	24	25	27	32	32	32	34	34	34	298	10,326

Practical training takes up 216 hours in urban schools, 288 hours in rural schools and 204 hours in optional practical courses, which depend upon the students' choice.

In the 1st, 2nd, 3rd and 10th forms the number of school weeks in the years is 34 ; in the 4th-9th forms—35, of which

one week or six school days per year are set aside for excursions and also for spring and autumn work on experimental grounds.

Of the total number of hours set aside for the study of the Russian language, penmanship takes up 2 hours a week in the first form, and one hour a week in the 2nd and 3rd forms.

The study of the Constitution of the USSR is included in the study of the history of the USSR in the 10th form.

In addition to the practical training conducted on the experimental grounds, at state farms and collective farms throughout the school years, the following is provided for :

(a) practical training in the urban school on its experimental grounds during promotion from the 5th to the 6th form—6 work-days ; from the 6th to the 7th form—6 work days, and from the 7th to the 8th form—6 work-days (four hours a day) ; practical training in the rural school on experimental grounds or at a collective or state farm, during promotion from the 5th to the 6th forms—12 work-days, from the 6th to the 7th form—12 work-days, and from the 7th to the 8th form—12 work-days (four hours a day).

(b) during promotion from the 8th to the 9th form practical training for pupils of urban and rural schools in agriculture—12 work-days of 6 hours each ;

(c) practical training during promotion from the 9th to the 10th form for pupils of rural schools, in agriculture—12 work-days, and for pupils of urban schools in industrial enterprises—12 work-days of 6 hours each. Practical training in industrial enterprises may be conducted during the school year.

During their studies in work in the 5th-7th forms and in the fundamentals of production for pupils of the 8th-10th forms, as well as for practical training, the form, if it consists of over 25 pupils, is split up into two groups. For instruction of pupils in driving a motor car (or tractor) 10 school hours are set aside for each pupil of the 10th form.

Substantial changes have been introduced into the plan suggested for testing during the 1956-1957 school year, as compared with the previous plan.

The number of hours for manual labour in the 1st-4th forms and for practical work in school workshops and on the school experimental grounds for the 5th-7th forms has been increased ; practical work for the 8th-10th forms has been replaced by a course of study called "Fundamentals of Industrial and Agricultural Production" and practical training at enterprises, state farms, collective farms, machine and tractor stations, and the number of hours devoted to the "Fundamentals of Production" and practical training has been more than doubled as compared with the number of hours set aside for practical work.

In order to improve physical culture work the number of hours set aside for instruction in physical culture in the 8th-10th forms has been increased.

The increase in the number of hours devoted to manual labour, practical studies and the fundamentals of production, including industrial training, as well as physical culture is obtained by adding an hour to the weekly plan of study for the 3rd-4th and 8th-10th forms and a partial reduction in the number of hours spent on certain other subjects as history, the Constitution of the USSR, geography, literature, physics, chemistry, Psychology has been eliminated completely from the curriculum in the secondary school.

The reduction in the number of hours for certain subjects has necessitated a corresponding reduction and certain changes in their course of study in order to be able to use the revised and new text-books published in recent years.

Those who finish the seven-year school should have an elementary knowledge of the technology of materials (wood and metal), tools, certain machines (the drilling machine and turner's lathe), and certain operations when working with materials. They should also have some understanding of metal-working and wood-working enterprises, should

be able to perform the simplest processes in handling materials, assemble articles of wood and metal, do the simplest electro-assembling work, and make working drawings.

The course on "Fundamentals of Production" for urban and rural schools includes the following :

Urban School	*Rural School*
8th Form—Machine-study—119 hours	8th Form—Plant growing—60 hours. Agricultural machine-study—59 hours
9th Form—Fundamentals of Industrial production at some definite enterprise—136 hours	9th Form—Livestock breeding—68 hours. One branch of agriculture prevailing in a given district—68 hours
10th Form—The motor-car—69 hours	10th Form—The tractor (or motor car)—68 hours
Electrotechnique—68 hours	Electrotechnique—68 hours

Besides the course in "Fundamentals of Production" for pupils of the rural school when they advance from the 8th to the 9th form and from the 9th to the 10th form, the course of study provides for practical training in agriculture, consisting of two weeks for each form, six hours a day. For pupils of urban schools the course of study provides for two weeks of practical training at a collective or state farm for those who advance from the 8th to the 9th form, and two weeks of practical training at an industrial enterprise when they advance from the 9th to the 10th form, or during the school year when they are in the 9th form.

In the urban school in the 8th form 3.5 academic hours per week are set aside for machine-study, 15 hours being devoted to theoretical studies and 2 hours to practical studies in the workshops and laboratory for machine-study or in the repair shop of some enterprise.

Machine-study includes an acquaintance with the parts of machines and the means of joining them, with machine aggregates and mechanisms, the structure and principles governing the operation of working machines (certain lathes and machines of a nearby enterprise), and also a theoretical and

practical acquaintance with the elements of the technology of machine-building (the materials used in machine-building, the operations involved in preparing and handling materials-casting, treatment of metals by pressure, welding, cutting, assembling and mounting, and the finishing processes). In the workshops and laboratory for machine-study the pupils will take apart and assemble mechanisms and machine aggregates, perform the simplest work in adjusting and repairing machines, and also acquire elementary skills in handling metals by cutting on a turner's lathe or milling machine. This course of study also provides for excursions to enterprises to acquaint the pupils with the processes of founding, punching, welding, lathe handling of metals, assembling of machines and their repair.

In the 9th form the pupils become acquainted with the fundamentals of industrial production through some definite enterprise where they see its output, raw materials, energetics system, technology, technique, organization of labour and the production processes. Here, too, they get their practical training. About 30 academic hours are set aside for their acquaintance with the fundamentals of industrial production, and 106 hours for practical training.

Such production specialization continues during their two-week's training when the pupils advance from the 9th to the 10th form (72 hours). Thus the total number of hours spent on practical work at an enterprise is 178.

The motor-car is studied in the 10th form, 68 hours being devoted to it. By this time the pupils will have received the necessary preliminary training in mechanics, heat, and electricity and will be able to master the theoretical knowledge and practical skills required to drive a car.

In the 10th form the pupils are given a course in electrotechnique with practical studies (68 hours). This course provides for an acquaintance with measuring instruments, electric engines and generators of direct and alternating current, with machines of three-phase current, the elements of electro-

technique and production electronics. They also acquire skills in operating electric engines and their maintenance and some of the simplest skills in the field of radiotechnique.

In the 8th form of the *rural* school 60 hours are set aside for plant-growing and 59 hours for a study of agricultural machinery. The pupils become acquainted, in theory and practice, with the soil and its cultivation, with seed farming, sowing, the care of the plants, and the harvesting of the crop. At the same time they acquire additional knowledge about the physiology of plants, which they need in order to comprehend the scientific foundations of plant-growing. Simultaneously they receive an idea of the basic parts of machines and the means of joining them, the mechanisms of agricultural machinery, tools and machinery used in tilling the soil and preparing the seeds for sowing, sowing machines and those used in caring for the plants, and harvesting machines. Briefly, the rural school not only gives the pupils a general knowledge of machinery but also an understanding of agricultural technique and its maintenance.

During promotion from the 8th to the 9th form the pupils have two weeks of practical training when they do some socially useful work at the collective and state farms, which makes their knowledge in plant-growing and agricultural machinery, acquired during the studies at school more lasting.

In the 9th form they are introduced to the fundamentals of livestock breeding and the technical installations used at the livestock farms, and acquire additional knowledge on the physiology of animals. This helps them to understand the biological elements of the care of these animals.

When advancing from the 9th to the 10th forms the pupils spend two weeks on practical training in that branch of agriculture which they studied more profoundly during the school year. Furthermore, they work with agricultural machinery.

In the 10th form (first semestre—68 hours) they study the tractor (or motor-car) theoretically and practically.

Optional practical studies as well as studies in tractor and motor-car circles enable such as wish to do so, to perfect their knowledge and prepare to work as tractor drivers or chauffeurs in agriculture.

In view of the need for workers at local enterprises, optional courses are organized in machine repairs, turner and milling machine work, and various forms of other work typical for a given branch of industrial production, at the enterprises where the pupils receive their production training, as in electrotechniques, the motor car, radiotechniques, mechanization and electrification of industry, horticulture, growing of industrial crops, seed-farming, agrotechnique, the dairy industry, poultry raising, hog-breeding, etc.

Production excursions play an important part in polytechnic instruction. They acquaint the pupils with production as a whole, with the work and achievements of the foremost people in industry and agriculture and with the latest technique and modern technology in production. The new curriculum provides for 6 school days per year to be set aside for excursions for pupils of the 4th-10th forms.

Moral upbringing. This is based on the principle that the formation of a pupil's individuality depends not only on the use of various measures but, chiefly, on their wise combination. The Soviet school employs various forms of persuasion, as talks with the pupils, reports, lectures and debates on aesthetic themes and questions concerning morals.

Experience shows that palpable results in the work of bringing up the children are obtained only if all the teachers make the same demands, if the work of the entire school collective, the family and the pupils' organizations is harmonized and if the pedagogical supervision of the pupils is combined with the development of their own activity and initiative, with their individual trends, inclinations and talents.

Soviet teachers devote special attention to developing the individuality of the pupil as fully as possible. They

painstakingly encourage and develop the abilities of every child. And the group is considered the most favourable condition for the development of his personality.

Soviet pedagogy and the Soviet school, both in theory and practice, renounce any sort of "levelling" of the children, which is incompatible with the ideals of socialism. The age traits and individual differences of the pupils are always taken into consideration. The moral upbringing of the pupils is regarded as the process of the organization of their life and activity in order to develop in them lofty moral qualities, positive character traits, and correct habits of conduct. During their studies, at lessons, on excursions and in the workshops, not only educational tasks are solved but also such as are connected with their upbringing. The children are instilled with a feeling of duty and honour, a feeling of responsibility for a task which has been entrusted to them, a conscious and conscientious attitude towards work, etc.

A number of special measures are also taken. In the first place, the children are given some socially useful work to do during their free time after school-hours. School "factories" have been organized, as well as Young Pioneer production establishments, school power stations and machine and tractor stations, youth and Komsomol camps, and school brigades and teams for work at collective farms.

The class-room teacher organizes the work of bringing up the children in the class-room. He embodies the combined efforts of all the teachers, school-children's social organizations and also their parents. The class-room teacher also sees to improving the proficiency of the pupils and organizes help to those who are backward. Much attention is also paid by him to the question of discipline. With the aid of the pupils, he conducts activities after school-hours, depending upon the ages and interests of the children. The chief forms of such activities are : information talks, discourses, readers conferences, debates, soirees organized to discuss special themes, collective visits to the cinema and

theatre with later discussions of what they saw and heard, excursions to museums and exhibitions, hikes, work in study circles, publication of wall-newspapers and journals, etc.

Aesthetic Education. The Soviet State has set itself the task of making the treasures of art accessible to all the people. To achieve this, it was necessary to raise the level of the aesthetic views and tastes of the people. One of the means for achieving this aim is the aesthetic education of the young in school.

The system of aesthetic education of the pupils is diversified : school lessons (literature, drawing, singing) which are compulsory for all pupils ; extra-curricular activities in art, music, drama and dance circles ; lectures, concerts, celebrations, exhibitions of children's drawings, contests for the best rendition of songs, dances and verse.

Far from everything has as yet been done in this field. The growing cultural demands of Soviet society call for better organization of the aesthetic education of the children, primarily in school inasmuch as it embraces all children.

Physical Education. In the 1st-4th forms 2 hours a week are devoted to physical culture lessons and in the other forms—3 hours. During their stay at school the children master the fundamentals of gymnastics, light athletics and skiing. The new courses of study for the 1957-1958 school year devote much attention to sports.

Physical education after class-hours is also greatly indulged in. From 1949 to 1957 the number of physical culture groups at the schools increased over twofold, numbering 35,000. District, city, regional and zonal athletic contests have become traditions of the schools. About 11,000 pupils took part in the semi-final and final contests for the III Spartakiad held in 1956.

At present there are 20 special faculties and 40 pedagogical schools and colleges for the training of public school physical culture teachers.

Even greater attention will be devoted to the physical

A lesson in artistic gymnastics.

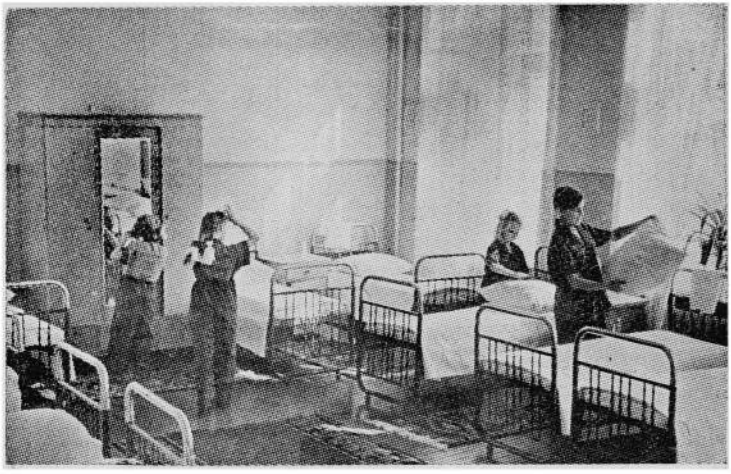
education of the pupils in the future.

Boarding schools. The first boarding schools of the USSR were opened for the 1956-1957 school year. There were then about 60,000 children attending them. Experience has shown that they meet the vital needs of Soviet society.

Children are accepted into the boarding schools exclusively at the wish of their parents or guardians. Preference is shown to orphaned children, children of unmarried mothers or mothers of large families, and such children as do not have proper conditions at home for their upbringing.

Orphans and children whose parents do not earn much are brought up in the boarding school at state expense.

The boarding-school is guided by the curriculum of the secondary school. The principle of combining instruction



A dormitory for girls at a boarding school in Moscow.

with production also underlies the instructional-educational work here.

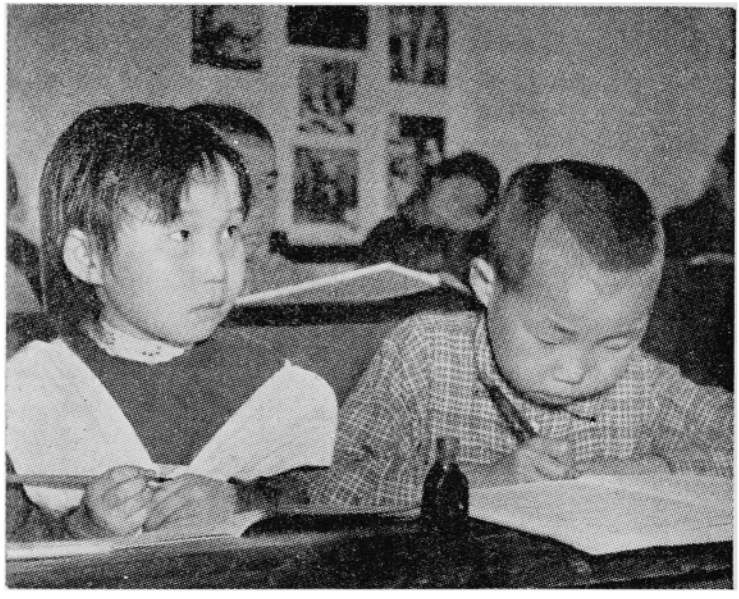
All boarding schools during the past school-year conducted study circles in technique and agriculture. Much attention was paid to acquainting the children with the local industrial enteprises, the work of the machine and tractor stations, collective farms and state farms. The children of these boarding schools were in close contact with the Soviet public, with the workers of the local factories and plants, collective and state farms. Thus, the present boarding schools have nothing in common with the pre-Revolutionary Russian boarding schools, either as regards the children themselves or the principles governing their upbringing.

Special schools. Pre-Revolutionary Russia limited the civic rights of deaf-mutes and the blind. There were

special institutions for them, opened, in the main, by various societies of trustees and private persons, but not the state. Of the 45,000 deaf-mutes in old Russia, about 3,000 studied in special schools. Over 93 per cent of them remained illiterate and were deprived of all rights.

Much attention is paid in the USSR to the proper upbringing and instruction of abnormal children. There are 218 schools for deaf-mutes just within the system of the Ministry of Education of the RSFSR, and their student-body numbers 23,064. There are 71 schools for the blind, with 5,842 pupils. There are also 265 other special schools with a student-body of 34,288 children.

An arithmetic lesson in the second form of an elementary village school in Sakhalin.



Extracurricular and Extramural Work

THE course of study is unable to encompass the diverse interests and cultural demands of the pupils. Extra-curricular and extramural activities have therefore been organized. They encourage the individual inclinations of the children and supplement what they receive at school.

The schoolteacher organizes and directs the extra-curricular activities of the youngest children. Much attention is paid to games, drawing, modelling, choral singing, dancing, and rhythmics. Individual or group instruction in the art of playing musical instruments is given to such children as reveal musical ability.

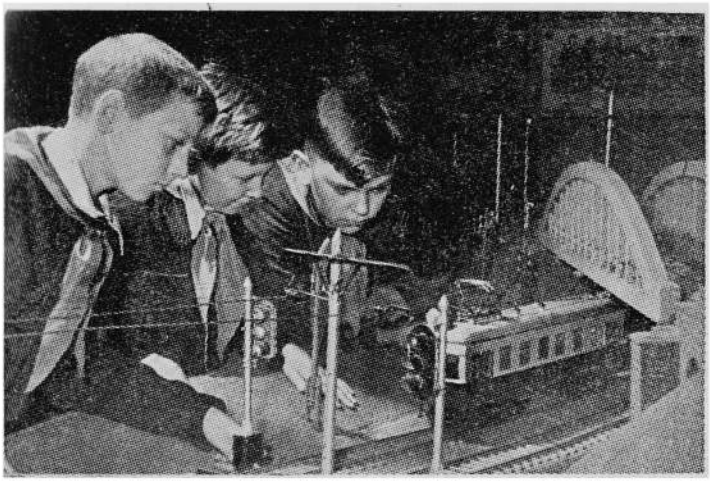
Work and studies in technique as well as activities for young naturalists, are organized for those in the primary forms. The most popular are the "Do it yourself" circles.

Physical culture and sports are also engaged in after school hours.

The 7-year and 10-year schools have various circles : literary, historical, geography, circles for studying a particular region or area, circles for young mathematicians, physicists, chemists, naturalists, labour and technical hobby circles, amateur art circles and sports sections. All of these help to deepen and extend the knowledge of the pupils and satisfy their individual tendencies and interests.

The labour and technical hobby circles inculcate in the children a love for work and an interest in technique, develop their technical creative initiative and give them practical skills. The work in the technical hobby circles for the pupils of the upper forms (8th-10th) takes into account their ages and aims to prepare them for practical activity and their choice of profession. The pupils show special interest in radiotechnical, electrotechnical, turner, milling machine and other similar production circles.

The young naturalists circles arouse in the children an interest in the natural sciences and agriculture. The young



At the railway laboratory of the Leningrad Young Pioneer Palace.

naturalists grow vegetables, fruit, and berries, decorative flowers, study insects, birds, rodents, and try to combat field and garden pests. Children of the middle and upper forms greatly enjoy studying their native regions. Studies in biology, agrobiology and agrotechnique is combined, at the wish of the pupils, with socially useful work in agriculture.

The amateur art circles in the middle and upper forms, as drama, choreographic, music, art and others, develop the pupils' abilities and talents in the various fields of art.

The children's extra-mural organizations also contribute to the upbringing and education of the children. Such organizations include the Houses and Palaces of Young Pioneers, the children's parks, their libraries and reading rooms, the Houses for the Artistic Education of Children, the children's theatres and cinema, children's technical hobby and naturalist

In the hot house of a Moscow school.

centres, etc. The USSR today has 2,382 Palaces and Houses of Young Pioneers, 258 Technical Hobby Centres, 214 Young Naturalist Centres, 135 excursion and tourist bases, 135 children's parks, 5,923 children's libraries, 101 children's theatres and puppet theatres, 29 children's railways, 806 children's sport schools, 33 children's stadiums. There was nothing like it in pre-Revolutionary Russia, nor could there have been.

The Houses and Palaces of Young Pioneers pay specially great attention to the development of the creative abilities of the young generation, and to deepening their interest in certain branches of science, technique and art.

Numerous collectives at factories and plants and at scientific research and educational institutions have helped to organize extra-mural facilities. The youth have built and equipped scores of Houses of Young Pioneers. The Leningrad Palace of Young Pioneers, which has about 700 rooms, has its premises in one of the most beautiful palaces. About 12,000 school children constantly take part in its various circles and groups. This Palace has a club of young chemists, a club of young geologists, young physicists, and others. It also carries on a wide correspondence with other lands, and organizes mass meetings of the children with visitors from abroad.

The Moscow city House of Young Pioneers, which was opened in 1936, has an excellently equipped choreographic

O, what a scene !
School children enjoying a puppet show in the school theatre.

studio, music classes, art and sculpture studios, laboratories for the study of energetics, metal-working, communications, chemistry, naval studies, a theatre with 670 seats, a puppet theatre and other cultural and educational activities.

About 3,000 pioneers take part in the 170 circles, sections and other amateur groups of the Moscow House of Young Pioneers, which has its clubs of young masters, technicians, aircraft modellers, its own radio-plant and factory which puts out table games.

Not so very long ago the pupils of Moscow schools organized their own "Club of Young Arctic Exlorers," and the summer of 1957 a large group of schoolchildren, on the invitation of the head of the Chief Administration of the Northern Sea route made a fascinating trip to the Arctic free of all cost to them.

The spring of 1957 a Children's River Navigation Club was organized in Moscow, and several "river trams," which were completely served by the young people, were turned over to it.

The Central Children's Technical Hobby Centre, which originated in 1926, and other similar centres in the provinces are of great practical help to the school in its polytechnic instruction. They hold seminars, give consultation, conduct methods conferences, generalize and publish the best work in technique, devote much attention to the development of circles for the study of the automobile and automobile designing, and help the schools in organizing industrial circles and circles with a professional trend, as turner, fitter, electrotechnical, and radio-technical.

There are Houses of Young Pioneers and children's technical hobby centres in almost every Soviet town. Large cities have their District Houses of Young Pioneers in addition to their City House of Young Pioneers.

The young naturalists' movement keeps expanding all the time. Young naturalist centres play an important part in this connection. They have their own libraries and exhibi-

tions, exemplary experimental grounds, hothouses, hotbeds, nature corners, meteorological stations, plant-growing laboratories, as well as zoology and livestock breeding laboratories.

These centres help the schools organize their own experimental grounds. They effectively conduct experimental work assigned them by collective farms, state farms, and scientific-research institutions. The most interesting achievements of the young naturalists are demonstrated in a special pavilion at the USSR Agricultural Exhibition in Moscow. The excursion and tourist centres carry on diverse educational work with the children. They organize hikes and tours, local and distant excursions, lectures and talks about their native territory, exhibitions of the work of young tourists and local explorers, etc.

Many towns have special extra-mural institutions as the Houses for the Artistic Education of Children, which help in the development of the artistic and creative abilities of the young in definite fields of art, as music, choreography, the fine arts, drama, and oratory.

Young Pioneer and Komsomol Organizations in the School

Almost every primary, 7-year and 10-year school has its Young Pioneer organization. Many 7-year and all 10-year schools have their Komsomol organizations.

The Lenin Young Communist League of the Soviet Union or Komsomol and the Young Pioneer organizations have, as their membership, the most active, conscious pupils.

The children are imbued with public spirit at home and in the school. This, in turn, arouses in them a desire to do whatever they can in the building of a new life without waiting until they have grown up.

The first Young Pioneer detachments appeared in Moscow in February—April 1922. Today there are over 18 million children in the Young Pioneer organizations of the country.

Boys and girls of the ages 10-15* can become young Pioneers. The tasks of the Young Pioneer organization include : to help the school and the teacher raise proficiency and improve discipline ; to develop in the schoolchildren their intellectual curiosity, persistence and diligence ; instill in them a love and respect for physical labour, ability to serve their own needs, ability to work. The Young Pioneer organization also looks after the health of the children and organizes their recreation.

One of the fundamental principles of Soviet pedagogy is that the proper upbringing of children is inconceivable without the proper organization of their life and activities. And the Young Pioneer organizations create the conditions necessary for this. In distinction to the school, they do not have a hard and fast programme. This enables the organization to react to the events in public life more broadly than the school, to maintain contact with enterprises and building jobs,

*Not long ago "Oktyabrists" groups, for children of the Primary forms who wish to join them, have been restored within the Young Pioneer organisations.

collective and state farms, and to participate in public work to the extent of its ability.

At the same time the Young Pioneer organizations, although they continually add to their content, forms and methods of work, create and preserve certain traditions. They have their units and detachments' meetings, pioneer bonfires and summer camps, hikes and tours, numerous technical and naturalist circles and many other activities.

The summer camps give the children a healthy rest amid nature, enrich their impressions, enable them to form lasting friendships, and to display their initative. Here amateur performances are given, concerts are held, the youngsters go on hikes, etc.

The youth of the upper forms manifest their social and political activity through the medium of the Komsomol organizations. At the Komsomol Congress held in 1936 it was decided to organize such organizations in the 7-year and 10-year schools. Although the Komsomol had exerted great influence upon the pupils even before then, this influence assumed a more organized form in the years that followed.

The school Komsomol organizations focus their attention on inculcating in the pupils a conscious attitude towards their studies and discipline and on forming closely-welded groups in the classes and in the school as a whole.

It requires 3 members of the Komsomol to form a Komsomol organization in a school. If there are over 100 Komsomol members in the school, such organizations are created according to forms.

One of the principles governing the activity of the Komsomol organizations is to interest the members in one or another useful form of activity, whether it concerns improving the life of the working people, planting greenery in towns or conquering the virgin soil. Komsomol members, pupils of the school, install radios, build gymnasiums or premises for workshops, equip athletic grounds, lay out gardens and flowerbeds on the school grounds and take care of them, make

Fully in accordance with Moscow traditions ! New graduates of a Moscow school have come out on Red Square to meet the dawn after their graduation party.

dummy models or operating models and other teaching aids for the school. Many Komsomol members are in charge of technical, agrobiological and art circles.

During the summer many Komsomol brigades work voluntarily on collective farm fields.

Komsomol-youth summer camps are becoming ever more widespread. Here the young people combine work at a collective or state farm with well-organized recreation and rest. The Komsomol organizations of Secondary School No. 2 in the town of Luga, Leningrad Region, was the first to organize such a camp.

Training Skilled Workers and Specialists with Secondary School Qualifications

IN pre-revolutionary Russia the trade schools and elementary technical schools, trained working "aristocracy" and junior technical personnel for the plants. The elementary trade schools and schools for trade apprentices chiefly served the handicrafts. The chief form of training skilled workers was individual apprenticeship. Specialists of secondary-school qualifications, technicians, and agronomists received their training in technical and agricultural schools, teachers—in teachers' seminaries, feldshers—in special schools for feldshers, etc.

The Soviet authorities have organized the training of skilled personnel for the national economy in a different way.

As early as the beginning of 1920 Factory-Training-Schools, called "FZO" schools, were organized at the enterprises of the country. These schools developed together with industry. Whereas in 1921 in the RSFSR and the Ukrainian SSR there were only 75 such schools with 4,000 pupils, in 1934 there were 2,357 such schools with about 400,000 pupils in them.

The Factory Training Schools played an important role in supplying industry with skilled workers and in the technical reconstruction of the national economy of the USSR. In the period from 1929 to 1937 about 2 million young skilled workers were trained, many of whom later became important organizers of production.

But these schools in spite of all, were unable fully to satisfy the needs of the rapidly growing industry as regards skilled workers. Many young people received individual instruction. In 1940 the Soviet government decided that it was necessary, while maintaining the factory training schools at a number of enterprises, to organize a state system of trade and railway schools as well as factory training schools to train labour reserves from among the youth, to the extent of 800,000 to 1 million people annually. By November 1940 there were

already over 1,500 such schools in the USSR, with a student-body of 600,000.

The State Labour Reserves played an exceptionally important role during the war. They trained about 2.5 million workers for the national economy and in the period from 1941 to 1955—almost 8 million workers.

In 1953 the labour reserves system was given the task of training skilled workers for the repair of motor-cars, tractors, combines and other agricultural machines, tractor drivers, mechanics and combine operators, etc. In the two years 1954-1955 the labour reserve system trained over 600,000 farm machinery operators. In 1955 one hundred thousand of them helped to cultivate the virgin soil.

In 1954 technical schools were created within the system of the State Labour Reserves on the basis of the 10-year-school. The workers trained in such schools are not only skilled in their own particular trades but have a general education and for the general level of their development and culture are not inferior to specialists with secondary-school qualifications.

The school buildings which the Soviet Union inherited from the old regime were a sorry sight numbering no more than 450 and accommodating only 54,000 people. Neither their number nor distribution could meet the needs of Soviet industry and agriculture. For instance, on the territory of Siberia, that extremely rich area, there was only one secondary technical school, that in Irkutsk. Central Asia, Kazakhstan, Georgia and Armenia did not have a single secondary technical school.

In the years immediately following the October Revolution secondary specialized education developed slowly. The Civil War, then the need to overcome the havoc that had been wrought and to restore the national economy distracted both the attention and funds of the young Soviet State. However, in 1928, when technical reconstruction of the national economy and the radical transformation of agriculture began

to get under way in the USSR, secondary education began to develop at a rapid pace. In the decade from 1929 to 1939 a large network of a secondary professional schools was organized. On January 1, 1939 there were 3,733 secondary specialized schools with 951,900 pupils in them.

During World War II their number was somewhat reduced, but beginning with 1945 there was another upsurge. In 1957 they had a student-body of 2,011,000 pupils.

The secondary professional schools are organized on the basis of the 7-year and 10-year schools. There are day and evening schools (in the latter case—the pupils are employed during the day) and correspondence schools. The day schools accept pupils of the ages 14-30. The evening schools and correspondence schools have no age limits. The course of instruction in the day secondary specialized schools is 4 years for those who have a 7-year school education, and 2—2-1/2 years for those with a 10-year school education.

The course of study in the evening schools is one year more.

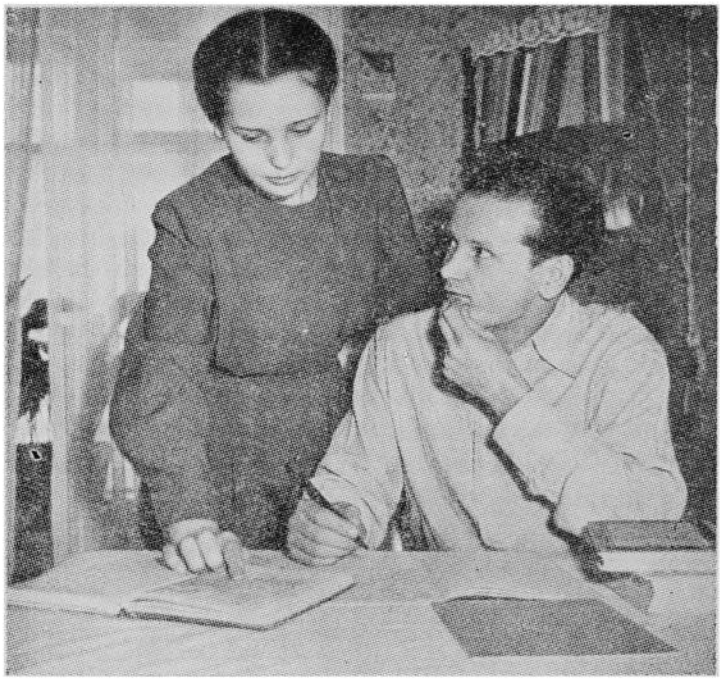
All secondary specialized schools in the USSR are maintained by the State and instruction is free of charge. Those pupils who receive marks of good and excellent as well as those in need receive state stipends.

The curriculum of the technical schools, medical, teachers' training, drama, music and other specialized schools includes (1) general educational studies ; (2) general technical studies (in the technical schools) ; (3) special subjects, and also production training. The school year begins September 1st and ends June 30. The summer vacation is two months, July and August.

Every pupil, after successfully completing the course of study in theory and after having had his practical training, must take State examinations or defend a diploma thesis before the State Examining Commission.

All who finish the secondary specialized schools are given corresponding diplomas and are ensured work in their speciality.

In Soviet days not only have the scope and rapidity of



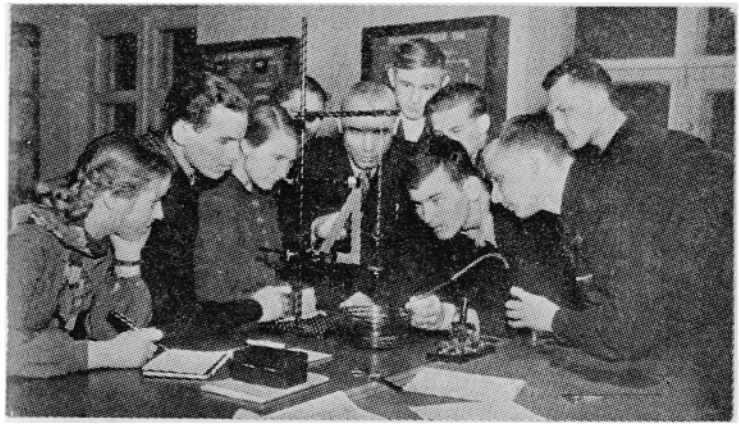
A working student of an evening school being helped by his wife in his studies.

training secondary-school specialists been changed, but their trend, content and methods as well. The technical and other specialized schools train personnel, intellectuals who come from the people and serve the people. That was by no means true of the pre-revolutionary technical, agricultural and other secondary professional schools which, in the main, trained specialists who came from the propertied

classes for work at capitalist enterprises and on the estates of the landlords.

Today the economic administrative areas have direct charge of the management of industry and construction, for which purpose economic councils have been organized there. It is their task to train workers for each economic area and to direct the secondary specialised schools. This will serve to strengthen the tie between the school and production and will ensure a further improvement in the quality of technical education.

First-year students of the evening branch of an industrial institute doing practical work in the physics laboratory



The Higher School

IN 1914-15 there were only 105 institutions of higher learning with a student body of 127,000 in Russia within its present-day boundaries. The bulk of them were in Petrograd, Moscow and Kiev. There were none at all throughout the vast expanses of Central Asia, in Byelorussia, in the Caucasus, or elsewhere in the country. Nor were there any in the Transcaucasus except for the women's courses in Tiflis. West and East Siberia had but three, and in the Far East, there was only one—the Eastern Institute.

In the very first decade of Soviet power the network of universities and colleges and their student body registered an appreciable increase. In the 1927-28 academic year there were already 148 higher educational establishments with a student body of 168,500. However, higher education really blossomed out in 1928-33, when deep-going social transformations were carried through in the USSR on the basis of the industrialisation of the country and the collectivisation of agriculture.

The realisation of the first 1928-32 Five-Year-Plan resulted in the rise of new industries : tractor making, motor car making, machine building, the chemical, aircraft, agricultural implements and engineering industries. The power industry, metallurgy, and mining, also developed apace in this period.

At the same time there appeared new technical, agricultural and other institutions of higher learning. The thirties were a time of the organisation of a broad network of higher schools necessitated by economic reconstruction and the demand for new professions.

In the prewar, 1940-41 academic year, the USSR had 817 institutions of higher learning including 17 correspondence establishments. The student body totalled 811,700, of which 226,700 studied by correspondence. More than half the students were women.

Naturally, the number of specialists employed in economy also grew. Whereas in 1928 it was only 98,000, by 1932 the number had more than doubled.

The war temporarily checked the further growth of the higher school. A goodly number of students, professors and teachers volunteered for the Army. Some 2,000 students joined the People's Volunteer Corps from the Moscow University alone. Many higher schools were compelled to evacuate into the hinterland. Many university and college buildings were destroyed. But even in those grim conditions higher schools went on with their work. War-time transfer of industry to the East was responsible for 56 new establishments of higher learning being opened in the Altai Territory, in the Omsk and Cheliabinsk regions, and elsewhere in the Urals and Siberia. In 1945-46 the student body at the universities and colleges was 730,200, just slightly less than on the eve of the war.

The institutions of higher learning underwent heavy reorganisation and enlargement in subsequent years. In 1955-56 the USSR boasted 765 universities and colleges, including 22 correspondence establishments. Though this was somewhat less than in 1940-41 (817), the student body was far bigger than before the war. Against the 1940-41 figure of 811,700, in 1955-56 it was already 1,867,000 and in 1956-57 was already past the two million mark.

University education takes pride of place in the training of high-skilled specialists. The country today boasts 39—there were only ten before the Revolution—universities, with 18 in the Russian Federation, seven in the Ukraine and the remainder in the other Union Republics.

The universities have the following departments : history and philology, combined or separately, law, economics, or economics and law combined, and physics and mathematics, combined. Some universities have departments of mechanics and mathematics combined, physics, chemistry, biology and soil studies combined, or simply biology, geology, geography,

or geology and geography combined, and also departments of foreign languages, Eastern languages and journalism. A few have technical and medical departments.

University education is based on a five-year course. The graduate is qualified as a philologist, historian, biologist, geologist, mechanical engineer, physicist and so on. History, philology, biology, chemistry and physics and mathematic graduates are simultaneously certified as secondary school teachers.

The institutions of higher technical learning are also paramount in the training of specialists. They are always in the limelight of attention, as scientific and technical progress depends on the knowledge of the technical cadres.

The USSR has today more than 200 establishments providing higher technical education. These include polytechnical, industrial, power, electrical engineering, radio engineering, technical physics, machine-building, machine-tool and instrument-making, auto engineering, aircraft engineering, geology, mining, chemical technology, civil engineering and many others.

Their student body totals 645,000. The course is between 5 and 5½ years.

The technical colleges do much research work. In 1957 they conducted investigations in radio electronics, heat-resistant alloys, gas-turbine construction, the use of isotopes in modern science and engineering, and so on.

Other fields of higher education, such as farming, economics, pedagogics, medicine, the arts, architecture, music and histrionics, are also well developed.

In the 1955-56 academic year the farming colleges had a student body of some 200,000, and gave instruction in the following professions: soil studies and agrochemistry, agronomy, vegetable growing and viticulture, plant protection, sericulture, zootechnics, veterinary surgery, land surveying, mechanisation of agricultural production, hydromelioration, forestry, agricultural economics and organisation, forestry

Practical studies of a group of students. of an agricultural institute in progress

and timber industry organisation, and timber industry and forestry machinery and mechanisms.

A higher farming education is provided at academies, institutes, and departments of agronomy at some universities. Several academies, as for instance, that named after Timiryazev in Moscow have their own curricula which, compared to institute curricula, furnish a deeper scientific and theoretical grounding.

In the 1955-56 year the colleges of medicine had a student body of some 160,000. Since 1945 the course of instruction is six years.

To have a clearer picture of the progress of higher education in the USSR in the forty years of its existence, it is enough to note that in graduation from institutions of higher technical education the USSR is at the top of the world table.

Girl students of the Khorog Teacher's Training College in Soviet Tajikistan.

In the Ukraine alone, its 134 establishments of higher learning had a student body of 326,000 in the 1955-56 academic year, nearly treble the number for all of Russia before the Revolution and far more than in France and Italy, taken together.

Higher education will gain still wider scope in the Sixth, 1956-60, Five-Year-Plan. Graduation of specialists will be one and a half times more than in the Fifth Five-year-Plan, and twice more in the heavy industries, construction, transport and agriculture. Evening and correspondence higher education is slated for considerable extension. This will

enable practical workers holding jobs as engineers and technicians, and also factory workers and collective farmers, to combine study with work.

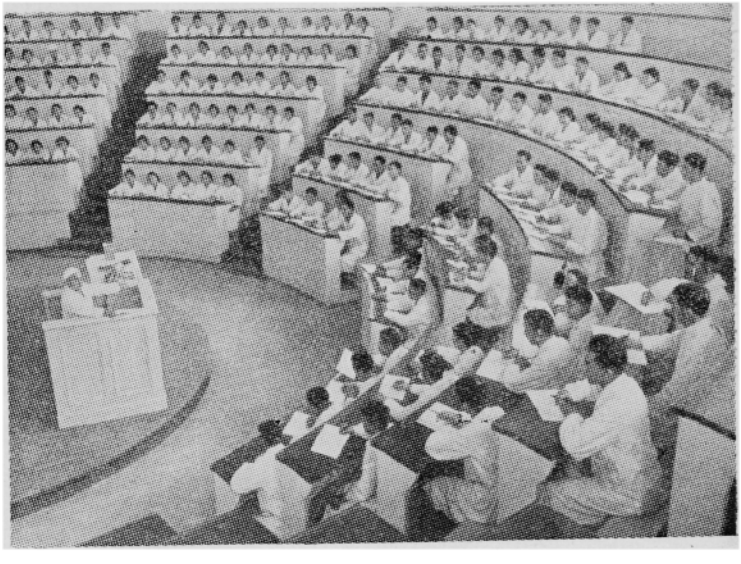
Especial attention is paid to a more rational zonal arrangement of universities and colleges. Specialists training will be primarily and considerably expanded in the Urals, Siberia, the Far East and Kazakhstan, where the want of specialists is greatest.

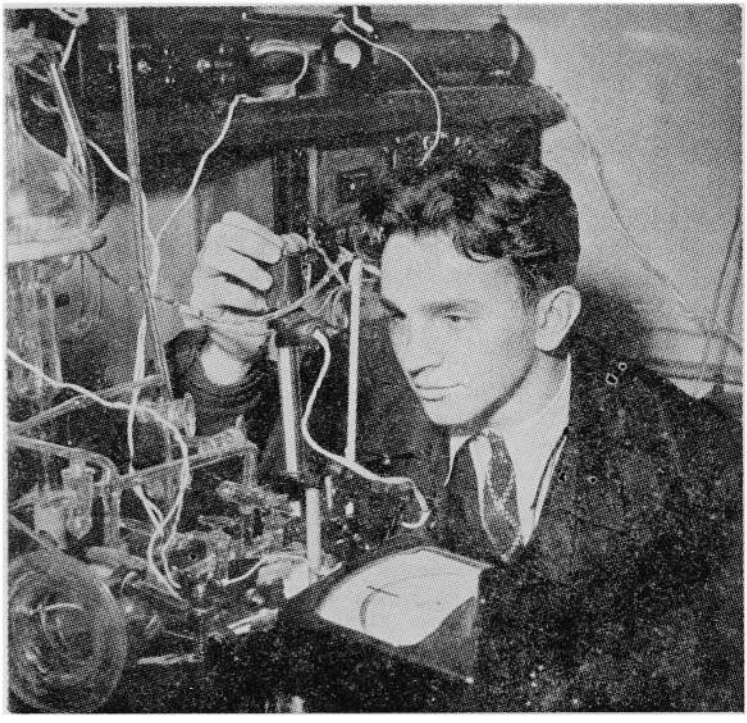
Graduating students of the Minsk Medical Institute.

This year the higher and secondary schools will graduate 837,700 specialists, 64,100 more than last year. Furthermore, graduates from evening and correspondence establishments will number more than 203,000. This form of education is given every encouragement in the Soviet Union through the provisioning of additional holidays, as much as four months, to these categories of students at the expense of their places of work, privileges in the distribution of accommodation tickets to rest homes and sanatoria and so on.

The standard of specialists training has also improved along with the growth in the scope of higher education. Whereas in 1954 university and college instruction was conducted in 500 specialities, today it is done in 274 professions,

A class lecture at the Azerbaijan Medical Institute (Baku)





A graduating student of the chemistry faculty in the laboratory of Moscow University.

naturally of a wider profile. The curricula were also revised when the profile was broadened. Here attention is chiefly concentrated today on a still wider profile through heavier grounding in general scientific disciplines and general engineering.

Revision of the curricula also allowed of substantially

renewing content in the light of the latest scientific and technical achievements. Thus in the machine and instrument making speciality courses have been added in "The Fundamentals of Electronics and Electro-automation in Instrument Making," "Electronic Microscopes Computation and Designing" etc.

The stress in the new curricula is now more on a general scientific and general engineering education.

An apposite illustration is afforded by the new curriculum in such a profession as "The Technology of Engineering, Metal-Cutting Machine-Tools and Instruments." Here, the social sciences account for 8.1% of the study time, general education disciplines, for 5.5 %, general scientific disciplines, for 15.5%, general engineering disciplines, for 43.9%, and special disciplines, for 27.0%.

Since the 1956-57 academic year, the social sciences incorporate 160 hours for CPSU history, the same number for political economy and 70 hours for historical and dialectical materialism. At the universities and several other institutions of higher learning these courses are somewhat larger. The introduction of these three independent disciplines enhances the standard of social science education.

Serious attention in the 1956-57 academic year was also paid to forging stronger links between the social science course and the profile of the respective higher school itself. This made the students more eager to take up the study of the social sciences as it demonstrated the bond between them and the students' future job.

To improve upon secondary school knowledge and supply the knack of translation from foreign languages, the curriculum includes a study of these languages in the first four years of instruction.

The general education disciplines also take in physical training, which is compulsory, as regards attendance, in the first two years and optional in the next two years.

The general scientific disciplines include, as a rule, higher

mathematics, physics, general chemistry and theoretical mechanics.

The general engineering disciplines incorporate the theory of mechanisms, the technology of metals, metal study and, sometimes, the study of materials.

The curricula of the establishments of higher technical learning place great emphasis on the strength of materials course. Building colleges also give a course in the theory of elasticity or plastics.

Electrical engineering and electrical appliances are also among the general engineering disciplines.

In many specialities the curricula provide for courses in heat engineering and thermodynamics.

University curricula are arranged otherwise. Here the pattern of disciplines is proportioned differently. Thus in "Physics," the social sciences account for 12.2%, the general education disciplines, for 9.8%, the general scientific disciplines, for 31.2% and the special disciplines for 46.8 %, of the study time.

The prevalence of special disciplines over all other sets of subjects does not imply, though, any narrow specialisation, as, in themselves, the special disciplines are theoretically broad. Suffice it to list the specialities in which students can acquire deeper knowledge in senior years: they have theoretical physics, low temperature, physics, molecular physics, optics, X-ray and metallography, magnetism, physics of solid bodies, electrical physics, the constitution of matter, radio physics.

All the establishments of higher learning, especially the universities, lay stress on selective courses, the initiative of the educational establishments being in no way cramped in this respect. Their councils are entitled, within the limits of the established weekly load on the student, to put any of the courses up for preference, as long as they are in the chosen speciality. Thus "Russian Language and Literature" gives this approximate list of selective courses: literature for

children, the history of Russian critical reviewing and journalism. West-Slavoniv language, South-Slavoniv language, etc.

Optional courses allow the instructors to deal more widely with novelties of science, engineering or production practice and to quickly respond to the scientific leanings of the students.

The curricula are orientated on every enhancement of independent work by the students in the most varied form.

Independent study of part of the programme material supplies the instructor with broader opportunities for a thorough and profounder exposition of the more complicated and important scientific problems and for familiarising the students with the latest, both the Soviet and foreign, scientific and technical achievements.

Accordingly, at several higher schools research training has received wide development. Thus, it is in wide use as practicals at the Moscow Lomonosov University, the Bauman Higher Technical School and elsewhere.

The curricula of the farming colleges apportion from 300 to 340 hours for special disciplines of a zonal character, enabling training of specialists in agriculture to be brought in closer touch with the specific features of the given zone.

Several of the bigger higher educational establishments with good, quite justified experience in training highly skilled specialists, practise what are called individual curricula, i.e., a curriculum intended only for the given educational establishment. This is done, for instance, at the Moscow and Leningrad Universities, the Moscow Higher Technical School, the Moscow Power Institute, the Moscow Mendeleyev Institute of Chemical Technology, the Moscow Aviation Institute, the Leningrad Polytechnic and at other higher schools.

In the forty years of Soviet power, a definite pattern of education has developed at the Soviet establishments of higher learning. It consists of the following key elements :

1. Theoretical grounding.

Showing her friends her matriculation book with the "excellent" mark.

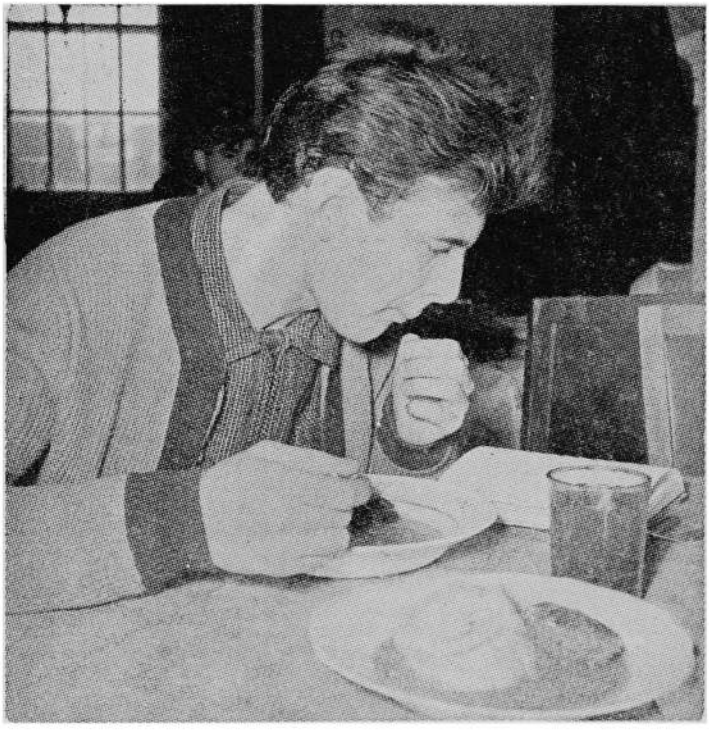
2. Study and production practicals, as an integral part of the study process.

3. Individual independent work by the student, both during theoretical instruction and practicals under professorial guidance.

4. Personal examination of the student's knowledge and work by the professor or instructor.

5. Generalisation of the knowledge accumulated by the student in the performance of different works and preparation for the taking of examinations and tests.

It is in line with this system that the study process at the higher school consists of lectures, practical and laboratory



Exams are after all exams.!
A student having a last look at his notes during his meals.

classes, term papers, training and production practicals, diploma theses, tests, and term and state examinations.

Of increasing importance is research work done by students in scientific groups. Statistics for 450 higher schools alone show that there are more than 300,000 students in scientific groups there. These groups are united in students' scientific societies. They take an active part in the organisation of conferences at which students report on the results of their

research work, in holding reviews of the best works, contests, etc.

In 1956 and 1957, reviews of scientific work done by the students were held in nearly all cities and towns having higher schools. Many works were presented for these reviews in Moscow, Leningrad, Minsk, Vilnius, Tallinn, Ashkhabad, Stalinabad, Stalingrad, Baku, Samarkand, Gorky, and Kuibyshev. Of the 545 works entered for a review in Minsk in early 1957, 430 were recommended for publication in journals, including, in particular, a number of works on metal technology.

The grand result of all these reviews throughout the country

Oral examination of a fourth-year student of Moscow University.

is that more than two thousand works have been awarded prizes, while several experimental investigations done by students were commended as being of great economic value.

The proportion of works in physics, chemistry, techniques, and agronomy has increased in recent years, the number of experimental investigations has grown appreciably, and the scholarly and theoretical standard of works in languages, history and other social sciences has risen.

Characteristic of the entire development of instruction at the Soviet higher school is the seeking to link theoretical training with the requirements of life and employ all resources in the pedagogical arsenal to achieve the clearest possible comprehension of the subject under study, and the knowledge thus acquired, firmly entrenched in the student's mind.

Production practicals are one of the cardinal links between theory and actual practices. There were practicals in some of Russia's universities and colleges even before the Revolution. This was exceedingly complicated, though, as many enterprises barred admission to students, fearing disclosure of production secrets. At the Soviet higher school production practicals are, part and parcel of the study process. They familiarise the student with the pith of his future job, enabling him to climb the main rungs of the production ladder from ordinary workhand to skilled specialist.

The bigger Soviet higher schools have their own student clubs, providing recreational facilities for the students and gratifying their cultural wants ; they arrange concerts, lectures, scientific debates and also get-togethers with public personalities, writers and scientists.

Student sports societies and clubs are very widespread. Many students hold World, Olympic and Soviet records. They made a very fine showing at the VIth World Youth and Students Festival in Moscow, and at the recent, biggest International University Sports Games in Paris in August-September 1957, where 29 countries were represented.

The international ties of the Soviet higher school are

What a good show this Tajik girl is making on uneven parallel bars !

becoming stronger and stronger with every passing year. Soviet scientists are more and more actively participating in international congresses and conferences ; they exchange scientific transactions with their foreign colleagues and acquaint themselves with the organisation of training and scientific work abroad.

In their turn foreign scientists deliver lectures and read

papers on various scientific topics at Soviet universities and colleges.

The Soviet higher school has its doors hospitably wide open to young people from abroad.

Training of Scientific Cadres

AT the universities and some colleges in Russia before the Revolution several dozen graduates (men only) were kept on every year to "aspire for a professorship."

In the USSR, ever since the inception of Soviet power, training of scientific and professorial cadres has been conducted on a planned basis. Post-graduate courses were organised at some institutions of higher learning in 1925-26, to subsequently become the basic form of training higher school instructors and scientific workers for the research institutes.

In the thirties the need for scientific cadres grew considerably due to the reconditioning of industry and agriculture and the extension of the network of higher schools, research establishments, laboratories and scientific stations. Therefore, at that time, training of scientific cadres gained wide scope. If in 1925-26 there were only 800 post-graduates, in 1930 there were already 3,000 and in 1937 as many as 9,000.

Postwar training of scientific cadres became still wider in scale. Within a period of 10 years, some 50,000 completed the post-graduate course. In 1956 there were already some 30,000 post-graduates of whom a third were women.

Graduate courses are organised usually at higher schools and research institutes staffed by especially highly qualified scientific personnel and having the appropriate study base (apparatuses, equipment, laboratories, etc.). Before 1956 the post-graduate courses accepted higher school graduates with a bent for scientific work. Now, however, no less than two years of practical work are required in the profile of the chosen speciality. Enrollment as a post-graduate immediately after higher school graduation is now permitted only as an exception, in the theoretical disciplines—mathematics, theoretical physics and some other subjects. Aspirants to the post-

graduate courses must pass the required entrance examinations and present a written paper or a published work in the selected profession. The post-graduate term, including defence of a dissertation for a learned degree is three years.

The instruction and scientific training of a post-graduate is composed of the following elements : a theoretical grounding in one of the socio-economic disciplines ; two foreign languages and disciplines in the chosen speciality : attendance of lectures, consultations and laboratory classes ; teaching and research in the chosen speciality, beginning with the second year of instruction ; independent research connected with the dissertation themes ; and preparation for the defense of the dissertation thesis.

Full-time post-graduates are entitled to a state scholarship and to a two-months holiday every year. In 1956-57 academic year steps were taken to substantially expand the training of scientific workers in the fields of physics, mathematics, biochemistry, radio engineering and several other branches of science and engineering. Priority in selection of candidates to vacancies at research institutes, higher schools and factory laboratories is given to those who successfully complete the post-graduate course and gain a Master's degree.

Apart from the post-graduate courses, the training of scientific cadres is also achieved by the passing of a required minimum of examinations before contending for a Master's degree, coupled with defense of the dissertation thesis. At the recommendation of the boards of scientific and technical advisors of the appropriate ministries and departments, the councils of the higher schools or of the research establishments those doing well in their work and studies are granted a three-months paid holiday to enable the contender to complete his dissertation thesis for a Master's degree, or a six-months holiday if a Doctor's degree is contended for.

The wide training of scientific cadres, was naturally, accompanied by a growing number of research institutes and also a rising scientific and theoretical standard of their work.

In 1914 Russia had only 289 scientific establishments, staffed by 4,240 scientific workers. The total of scientific workers, including college professorial and teaching staffs was just slightly above 10,000.

In 1939, the USSR had 1,557 scientific institutions of all categories, and in 1956, already 2,797. In 1940 the total of all categories of scientific workers was 93,300, and in 1956 already 239,900, of whom 106,400 worked at research establishments.

Today, apart from the Academy of Sciences of the USSR, there are republican Academies of Sciences in all the Union republics, except for the Russian Federation and Moldavia. A Siberian branch of the Academy of Sciences of the USSR was organised in 1957.

Scientific development is subsidised by large, constantly growing state appropriations. Expenditures for scientific purposes in the First, 1928-32, Five-Year Plan were 877 million roubles, in the Second , 1933-37 Five-Year Plan, already 3,015 million roubles, and in the first three years of the Third Five-Year Plan (1938-40)—3,084 million roubles.

State-borne expenditure on scientific development grew particularly so after the war. Here are a few figures.

Year	Expenditures in thousands of millions of roubles
1946	4.4
1950	5.4
1955	8.3
1956	10.3

State appropriations are not the only source of funds for scientific development. The economic organisations have also contributed a goodly share. In 1955 for instance, their outlays thereto totalled about 3,400 million roubles.

Last year the grand total of expenses on science, including both funds from the budget and economic organisations, amounted to 16,400 million roubles, while this year it will reach 18,200 million roubles, of which 15,000 million will be covered by the budget.

The heed paid in the Soviet Union to scientific research, to the training of scientific cadres, to the extension of the network of scientific establishments and to their equipment with the most up-to-date appliances has borne fruit. The year of 1957 was marked by a whole number of signal achievements in Soviet science and engineering, in both theory and its concrete embodiment. This is borne out by the TU-104 and TU-114 planes, by the starting of the world's biggest particle accelerator, the proton synchrotron, and by the launching of two sputniks, as the crowning feat. This all shows that not only rocket science and engineering but also such branches of science and knowledge as mechanics, metallurgy, chemistry, radio-engineering, automation and the like are on a very high level.

Izzya' Orudzheva, Candidate of chemical sciences working on her D.Sc. thesis (Azerbaijan SSR)

Cultural and Educational Institutions

CULTURAL and educational institutions occupy an important place in the Soviet system of public education. These institutions include libraries, clubs, Houses and Palaces of Culture, museums, exhibitions, parks of culture and rest, and others.

The following types of libraries exist :

State public libraries—these are of all Union and republican significance. They absolutely receive copies of all literature published in the country and serve all citizens. Among these libraries are the Lenin State Library of Moscow, one of the largest in the world, and the Saltykov-Shchedrin State Library in Leningrad.

State Central Branch Libraries—for definite branches of knowledge, as the Ushinsky library on public education, the Historical and Medical libraries in Moscow, and others. They provide special literature for people engaged in scientific or educational work.

Scientific libraries—at scientific-research institutions (academies, institutes, scientific centres).

Public libraries—local libraries for general use. They have the main books on all branches of knowledge, including fiction. The regional, city, district and rural libraries usually have travelling libraries as well.

Institutional libraries—at institutions and enterprises to serve the readers at their place of work.

Children's libraries—have special collections of books for children of all ages.

School libraries—have a collection of children's fiction and school literature.

In 1956 the USSR had 391,952 libraries with a total of 1,352 million books, which meant an average of 670 books per 100 people, or almost 7 books per person. Pre-revolutionary Russia had but 9.4 million books in all.

Books have become a vital need of millions of Soviet people.

The public libraries of the Ministry of Culture of the RSFSR alone, had 40 million readers in 1955. Each of them had read an average of 18 books during that one year.

Bibliographical material is published in large quantities. It includes book annals, annals of periodical publications, annals on publications in the fields of medicine and art, recommended reading lists, information libraries, etc. An inter-library book exchange has been organized to satisfy the needs of the readers most fully. An international exchange of books is also widely practised. The V.I. Lenin State Library alone exchanges books with 900 libraries and institutions of 53 different lands.

The libraries organize exhibitions of books and journals, readers' conferences, literary gatherings, reviews of and talks on books, etc.

Institutions of the club type—Palaces and Houses of Culture, city and rural clubs, rural reading rooms. Some of these are state institutions ; others are maintained by the trade unions or collective farms. In the category of clubs we may also include the Houses of Writers, Architects, Scientists, Teachers, Technicians, Officers clubs, etc.

The following table shows the growth of cultural and educational institutions :

Year	Total number o Clubs and Club-like Institutions	Of that number Urban	Rural
1914	237	143	94
1931	40,889	5,985	34,904
1939	104,061	8,486	95,574
1956	126,361	11,440	114.921

There are 83,944 clubs within the jurisdiction of the State and 14,485 clubs, Houses and Palaces of Culture within that of the trade unions. Over 24,000 clubs belong to the collective farms.

The activities at all clubs are based on the free will of the working people, their initiative and interest. Some prefer a concert or dramatic performance, others the cinema,

still others come to attend some circle, to hear a lecture or report, or simply to relax while enjoying a friendly conversation with a comrade, a game of chess, a journal, etc.

Every club has some particularly active group which consists of the leaders of the various circles, lecturers, orators, members of various amateur art circles, etc. The clubs are headed by a Council or Board. These councils and boards are elected at meetings of this active group to whom they report periodically on their activities.

Museums. There has been a considerable increase in the number of museums during the years of Soviet power. In 1914 there were 180 museums, only 61 of which were local lore museums. In 1956 the USSR had 862 museums, of which number 423 were local lore museums, 115 art museums, 157 memorial, and 93—historical and historico-revolutionary. The local lore and historical museums, by themselves, have over 11 million objects in their collections.

The State Hermitage in Leningrad ranks among the first museums of the country. It contains remarkable monuments of the culture and art of many peoples and lands the world over, numbering about 2 million objects in all. It was only after the October Revolution that they became accessible to the masses.

The State Russian Museum in Leningrad is one of the largest depositories of Russian art. Its collections of drawings and engravings, articles of applied and folk art, monuments of ancient Rus and the works of outstanding masters cover a period of almost a thousand years of the history of Russian art, beginning with the 11th century.

The State Tretyakov gallery in Moscow enjoys world fame. It is a treasure-house of remarkable works of painting, sculpture and the graphics.

The State Historical Museum in Moscow has about 3 million objects of archeological and historical significance.

Other museums that are well-known both in the USSR and abroad are the USSR Museum of the Revolution, the V.I.

Lenin Museum, which is devoted to the founder of the Soviet State, and the Leo Tolstoy Estate-Museum in Yasnaya Polyana, where he conceived of and wrote many of his works.

Almost every regional and territorial centre has its local lore museum, which shows the past and present of the given region or territory.

In 1955 the museums were visited by about 40 million people, half of whom showed preference for the art and historico-revolutionary museums.

Parks of Culture and Rest. There are over 2,000 parks of culture and rest in the USSR. Over 100 million people visit them every year. Moscow has seven such parks for instance, and on Sundays in summer over 500,000 people frequent them, which is considerably more than can be accommodated at one time in all the clubs and theatres of the capital.

The laying out of parks is developing on a broad scale in the USSR. In the years 1955-1956 over 41 million rubles were spent on improving the parks of Moscow alone. In the towns of Krasnodar, Kalinin, Bryansk, Pyatigorsk, Rostov-on-Don, Stavropol, Izhevsk, Smolensk, Ivanovo and elsewhere the public takes an active part in laying out parks and in the measures conducted there. In Kalinin public organizations helped to build a summer theatre, circus, and roads, in Pyatigorsk they built a swimming pool, etc.

After the war all parks in the Ukraine were restored by the public. The youth and adult population of the RSFSR, Lithuania, Moldavia and Uzbekistan every year plant hundreds of thousands of bushes in their parks, millions of flowers of all kinds, level and clean the lanes, etc.

In pre-revolutionary Russia the parks and gardens in the towns and worker's communities were in a neglected state. The city of Yekaterinburg (now Sverdlovsk) had but two boulevards for public use. Green lawns and flowers were to be seen only on the estates of its mine-owners and at the so-called "General's country-home." Today this city has beautiful boulevards, squares and parks.

Amateur art festivals and contests have become quite widespread in the parks of culture and rest of the city of Sverdlovsk. The parks are accessible to all who wish to relax there. Here theatre performances are given as well as concerts of symphony and jazz music, the people promenade here, festivals are held in the parks, as well as contests in all sorts of professional and amateur art, circus performances, carnivals, dances, music lectures and much more. This is far from a complete list of all the activities that are regularly organized and conducted in the parks.

In the parks of Chelyabinsk, Saratov, Grodno, Rostov as many as 70 symphony concerts are given during the summer season. The town of Armavir, Krasnodar Territory, has a small park where, the past summer, 93 plays and concerts were given.

How wonderful are the Moscow suburbs in winter !

Public Education in the National Republics

FROM the very first days of its existence the Soviet State showed its concern for the all-round development of the economy and culture of the formerly backward peoples of Russia.

The republics of Central Asia are striking examples of the rapid advance of culture and public education. Turkmenia was one of the most backward districts of tsarist Russia. Before October Revolution not a single book was published there in the native language. The only newspaper that appeared there, "Zakaspiiskoye Obozreniye" (Trans-Caspian Review), was put out in a mixed language, half Farsid and half Turkic. In 1914—1915 there were only 58 schools on the entire present territory of the Turkmen SSR, with a student-body of but 6,800 children who came, in the main, from the homes of the rich landowners, the khans, merchants and tsarist officials. Practically the entire people were illiterate. There were only 7 literate people per 1,000 of the population, and almost no literate women whatever. During the years of Soviet power Turkmenia became a country where everyone is literate. Universal 7-year education was introduced everywhere in Turkmenia in 1949. In 1955 this Soviet republic had 1,186 schools with a student-body of 225,000, of whom 124,000 studied in 10-year-schools.

Former Turkmenia could not even dream of a higher school, let alone scientific institutions. The first higher schools appeared in this republic in the 1930's and in the 1955-1956 school year it had 6 higher schools with a student-body of 12,160.

The past of Uzbekistan was a very grievous one. There were only 160 schools on the territory it now occupies, with 17,300 pupils, the children of the local feudal-bourgeois upper classes and tsarist officials. The October Revolution made economic, political and cultural progress possible for the Uzbek people, just as it did for the other peoples of the USSR.

A children's nursery in Chelcken (S. Turkmenia)

In a historically brief period Uzbekistan overcame its economic and cultural backwardness and became a flourishing republic.

Before the Revolution only 2 per cent of the population of Uzbekistan was able to read and write. Today there is not an illiterate person to be found there. The school year 1949-1950 saw the completion of the transition to universal 7-year education. Beginning with the 1953-1954 school year a universal 10-year or secondary school education began to be introduced in Tashkent, Nukus, Andizhan, Bokhara, Karshi, Ferghana, Samarkand and other towns. Whereas in 1950 there were 566 secondary schools, in the 1955-1956 school year there were 945, and the number of pupils in the upper forms increased from 57,700 to 225,500. In the 1956-1957 school year the general educational schools of Uzbekistan had a student-body of 1,333,000 children.

The content of their education has also changed. The children study in their native language and master the fundamentals of the sciences, polytechnic knowledge and skills, and are brought up in the spirit of humanism.

Pre-school education has been widely developed in the republic. The first four kindergartens for Uzbek children were opened in Tashkent in 1918. By the beginning of 1956 there were over 1,000 kindergartens which took care of 55,600 youngsters.

The specialized schools and labour reserve schools in Uzbekistan have, since their foundation, trained tens of thousands of young skilled workers for various branches of

A lesson in the First Form (S. Uzbekistan)

the national economy. Specialists with secondary school skills are trained in 98 specialized secondary schools which have a student-body of 41,000. The republic has 19 teachers' training schools which prepare teachers for the primary schools.

Before the October Revolution Uzbekistan did not have a single higher educational institution. In 1956 it had 36 with a student-body of 71,500, which is more than half of all the students in pre-revolutionary Russia.

The higher schools of Uzbekistan prepare specialists of all kinds, as teachers, engineers, economists, doctors, agronomists, etc. The largest higher schools in Uzbekistan are the Central-Asian and Uzbek universities and the Central-Asian Polytechnic Institute. For every 10,000 of its population Uzbekistan has 71 people with a higher education. That is twice as many as such a cultured land as France has, and six times as many as Turkey has.

Uzbekistan also has its own Academy of Sciences, which conducts important research work in the peaceful use of atomic energy. Its scientific institutions and higher schools have a personnel which numbers about 6,000 scientists.

Today there is not a single enterprise, state farm or collective farm in Uzbekistan, which does not have its library, club and cinema. In 1955 the republic had 3,571 public libraries with a book fund of 13,504,000 copies.

The republics of Tajikistan, Kirghizia and Kazakhstan have traversed similar paths.

The Tajik people, who enriched the culture of mankind with the works of Avicenna, Firdausi and other great thinkers of antiquity, was doomed to ignorance by the oppression of the tsar and the emir. But a new life began for Tajikistan with the establishment of the Soviet state. Universal 7-year education prevails everywhere in the republic today, and the transition to universal 10-year education is under way. In the 1955-1956 school year Tajikistan had 1,103 seven-year schools with over 145,000 pupils in them, and 278 ten-year

In the Tajik Academy of Sciences :
Research workers checking the operation of instruments.

schools with over 136,000 children.

The Tajik republic also has specialized secondary and higher schools : a university, polytechnic, agricultural and medical colleges, five pedagogical institutes and over 20 specialized secondary schools.

In 1951 Tajikistan acquired its own Academy of Sciences which has, within its jurisdiction, the following scientific research institutes : history, archeology and ethnography, language and literature, botany, chemistry, zoology and others. The republic has about 2,000 libraries of all types, over a thousand clubs and other similar institutions, about 30 parks of culture and rest, 8 theatres and other cultural

A group of ninth-form pupils of the Przhevalsk (Kirghizia SSR)

and educational institutions. What is most remarkable is that the Tajik people who, in the recent past had been an oppressed ignorant people, have created their own native intelligentsia, thousands of their own teachers, engineers, agronomists, doctors, scientists and artists.

Cultural work in Kirghizia had to be begun from its very foundations. Everything had to be created anew. And the Kirghiz people, liberated from social and national oppres-

sion, in the course of 40 years created their own culture, one that is national in form and socialist in content. In 1956 this republic had 1,711 schools with over 310,000 pupils. Compared with pre-revolutionary days, the number of schools increased 17 times and the number of pupils—45 times. Kirghizia today also has numerous extra-mural children's institutions.

The pedagogical institute, which was organized in 1932 was the first higher educational institution in Kirghizia. Eight other higher schools were organized during the 25 years that have elapsed since then. In 1956 they had 14,800 students. There were 28 specialized secondary schools in 1956 with 14,400 students. Kirghizia has its own Academy of Sciences.

Illustrative of the tremendous advance made in the field of culture is the fact that many of the chairmen of Kirghiz collective farms are people with a specialized higher and secondary education.

Before the October Revolution the Kirghiz people did not even have their own written language. The first newspaper in the Kirghiz language was published on November 4, 1924. Today scores of newspapers and hundreds of books running into millions of copies are published in this republic.

Just a few words about Kazakhstan. According to the 1911 census in the Akmolinsk and Semipalatinsk regions, of the total number of pupils in the Western-Siberian area only 1·33 per cent of the boys and 0.19 per cent of the girls were Kazakh children. In the Turgai and Ural regions, which formed part of the Orenburg educational area, there were only 500 pupils for every million of the Kazakh population.

It was only the radical economic and political transformations that made possible, within the brief space of several decades, the creation of a wide network of pre-school institutions, schools, extra-mural children's institutions, secondary and higher specialized schools, libraries and clubs in Kazakhstan.

Universal 7-year education is now in force and the transi-

Shakar Iskakova, teacher of geography at the Karaganda Kazakh Secondary School No. 2, with pupils of the ninth form.

tion to universal 10-year education has also been effected in the capital, the regional centres and the large industrial cities of the republic.

During the 1955-1956 school year about 1.3 million children studied in the Kazakh schools, of which number 645,497 attended the 10-year schools.

In 1955-1956 Kazakhstan had 25 higher schools with a student-body of about 50,000. This is only slightly less than half of the entire student-body of pre-revolutionary Russia. In 1955-56 the republic had 134 secondary specialized schools with 67,400 pupils. Just during the fifth five-year-plan period the specialized schools and labour reserve schools of the republic graduated 94,000 skilled workers.

A common feature for all the Central Asian republics and one of the most outstanding achievements in the field of public education is the fact that girls are now attending educational institutions in large numbers. The Soviet power had to overcome tremendous difficulties, the prejudices of national traditions and customs in order to achieve the emancipation of women. Today millions of girls attend the general educational schools and higher educational institutions.

The Transcaucasian republics, likewise, have considerable achievements in the field of public education. In Azerbaijan, for instance, 97 per cent of the population were illiterate, while practically all of the Azerbaijan women were unable to read and write. Today universal 7 year education is in force throughout Azerbaijan and the transition to universal 10-year education is being effectively carried out. In the 1955-1956 school year the republic had 3,616 schools with 593,444 pupils. The number of Azerbaijan pupils has increased 18 times.

Before the October Revolution this republic had but three specialized secondary schools with 455 pupils. In the 1956-1957 school year the number of such schools had increased to 79 and their student-body to about 30,000.

Soviet Azerbaijan has 14 higher educational institutions,

A scene at a kindergarten of "Stalinoneft" trust in Baku (Azerbaijan)

which include a university, an industrial college, a polytechnic college, 5 teachers' training colleges, and others. The number of students in its higher schools in 1955 was 34,700. Azerbaijan now ranks among the leading Soviet republics for the level of development of its higher education.

Georgian culture is one of the oldest in the world. However, for a long time Georgia was under the heel of foreign

The Hall of the library of the Stalin Mine in Tkibuli (S. Georgia)

conquerors and for centuries was oppressed by the tsarist regime. Before the Revolution about 80 per cent of its adult population was illiterate. Under Soviet power Georgia soon became a land whose entire people were literate and it achieved a high level of education. With a population of 4 million, 676,763 children attend the general educational schools of the republic, 427,001 of them—the 10-year schools. There are few countries the world over that have such a highly developed network of secondary specialized schools, higher schools and scientific institutions as Georgia. It has 19 higher schools with about 40,000 students, and 128 scientific institutions with a personnel of 2,407 scientists.

And so, every republic reflects striking changes in all fields of endeavour, and especially in the organization of public education.

Pupils of a prolonged school-day group in the recreation room.

The Soviet Schoolteacher

OLD Russia had a total of 230,000 schoolteachers. The USSR in 1956 had 1,855,000 schoolteachers.

In order to train such a large number of teachers in a relatively brief period it was necessary to create a wide network of higher and secondary pedagogical schools, courses, methods departments and similar institutions.

Primary schoolteachers receive their training in teachers' training schools where the course of study is four years. Besides a general secondary education these schools give the future public schoolteacher theoretical knowledge in psychology, pedagogy, the history of pedagogy and methods of teaching various subjects taught in the primary school. Much attention is devoted to practice training in the schools in the preparation of the future teachers. In 1953 the reorganization of the teachers' training schools was undertaken. Most of the schools require that new entrants have a secondary-school education. Formerly all schools admitted those with a 7-year education. With the 1957-1958 school year the training of teachers for the primary schools was begun at higher pedagogical schools.

Teachers for the 5th-10th forms of the secondary school receive their training at higher educational institutions, as pedagogical colleges with a four-year course of study and the universities. Some such colleges have special faculties which train teachers of pedagogy and psychology for teachers' training schools and highly qualified specialists for pre-school education.

All regional centres and large towns in the Soviet republics have institutes for the advanced training of teachers. Here the teachers can regularly freshen up and supplement their knowledge with the latest achievements of science. Teachers can also better their qualifications while continuing their teaching, through evening and correspondence departments of the pedagogical and teachers' training institutes. There

are also special courses for teachers of non-Russian schools, in particular for such peoples as formerly had no written language of their own.

A higher *scientific* pedagogical institution, the Academy of Educational Sciences of the RSFSR, has been set up in the USSR. It embraces outstanding scholars in the field of pedagogy. This Academy is engaged in the scientific solution of problems of pedagogy, psychology, methods of teaching various subjects in the primary and secondary schools and helps to develop public education in the country and popularize pedagogical knowledge among the people.

The Academy of Educational Sciences has 7 scientific research institutes in Moscow and 2 in Leningrad, its own library and publishing house.

Almost all the Union Republics have their scientific research institutes of educational sciences. Scientific-pedagogical and methods literature, a number of pedagogical magazines, and the "Uchitelskaya Gazeta," ("Teachers' Newspaper" are published for teachers ; numerous lectures and radio broadcasts on educational questions are organized. "Teachers' Readings" are held annually, at which teachers speak on various pedagogical problems. The best reports are rewarded and are printed in separate pamphlets or as articles in magazines on education.

The Soviet State regards a long, successful record in the education and upbringing of children as a labour feat and as a great service rendered to society. It has established, by a special legislative act, the honourable title of "Honoured Teacher of the Republic," and awards medals and orders of the Soviet Union to teachers for a long record of service and good work.

Teachers enjoy a number of privileges. Their salaries are similar to those paid to engineers and technical personnel. For every five years of service they are given additions to their salaries. Teachers of remote areas receive higher salaries.

Habiba Yusupova, Honoured Teacher of the Uzbek SSR, Tashkent.

The Soviet system has created a new type of teacher, the teacher-social worker, who maintains close ties with the people. Soviet teachers take an active part in the public life of the country, are deputies to the Supreme Soviet of the USSR and to the Supreme Soviets of the Union and Autonomous Republics. There is not a single rural, district, urban or regional Soviet of Working People's Deputies which does not have some teachers among its deputies.

E.V. Martyanova, who has spent over 50 years in the noble work of bringing up children, has repeatedly been elected deputy to the Supreme soviet of the USSR.

Other deputies of the Supreme Soviet of the USSR are A.S. Shaposhnikova, a teacher at school No. 21 in the town of Orjonikidze, Bukesh Zhylkibayeva, a teacher in Kirghizia, A.G. Magomedova, a teacher of Daghestan.

M.V. Kropacheva, a schoolteacher, has written a number of works on questions of public education. She is also a corresponding member of the Academy of Educational Sciences and a deputy to the Supreme Soviet of the RSFSR.

The Soviet schoolteacher is an all-round educated person with broad cultural demands, a person conscious of his responsibility to society for the education and upbringing of the children.

Many Soviet schoolteachers take an active part in solving theoretical, pedagogical and methods problems, and are the authors of school text-books, methods aids and pedagogical monographs. They invariably are members of the editorial boards of scientific-pedagogical and methods magazines. Twelve teachers were elected corresponding members of the Academy of Educational Sciences, among them V.A. Larichev and A.I. Yesipova-Voskresenskaya.

The high social esteem in which the Soviet school teacher is held makes it easier for him to discharge his direct professional duties most effectively. He studies the valuable experience of the pre-revolutionary school and the classics of world and Russian padagogy. It is characteristic of the

Eteri Abuladze (centre) director of the Pedagogical School in the Hulo village & Deputy to the USSR Supreme Soviet, talking to her Pupils.

Soviet teachers to bring to the school the spirit of searching for the new and innovation. And the Soviet school affords them every oppportunity for manifesting their initiative. The obligatory curricula and courses of study do not dull the initiative of the teacher. On the contrary, their fulfilment is impossible without his many-sided creative work.

A distinguishing feature of the Soviet teacher's pedagogical activity is that he has to do with pupils who are united in pupils' collectives, whether the class, school, pioneer organization, or Komsomol, and not with a mass of individual, disunited pupils.

The Soviet teacher tries to influence not so much the

individual child taken separately as the entire children's group as a whole by organizing its activity, whether educational, public, etc., reaching the individual child through the collective. That explains why the Soviet teacher is not only a leader with authority, one who has the right and duty to demand, to ask things of the pupils, but also a responsive elder comrade and organizer.

The heirs of all that was finest in the democratic pedagogy of the past, the Soviet schoolteachers, in their relations with the children go further : they embody in these relations the principles of socialist humanism and democracy.

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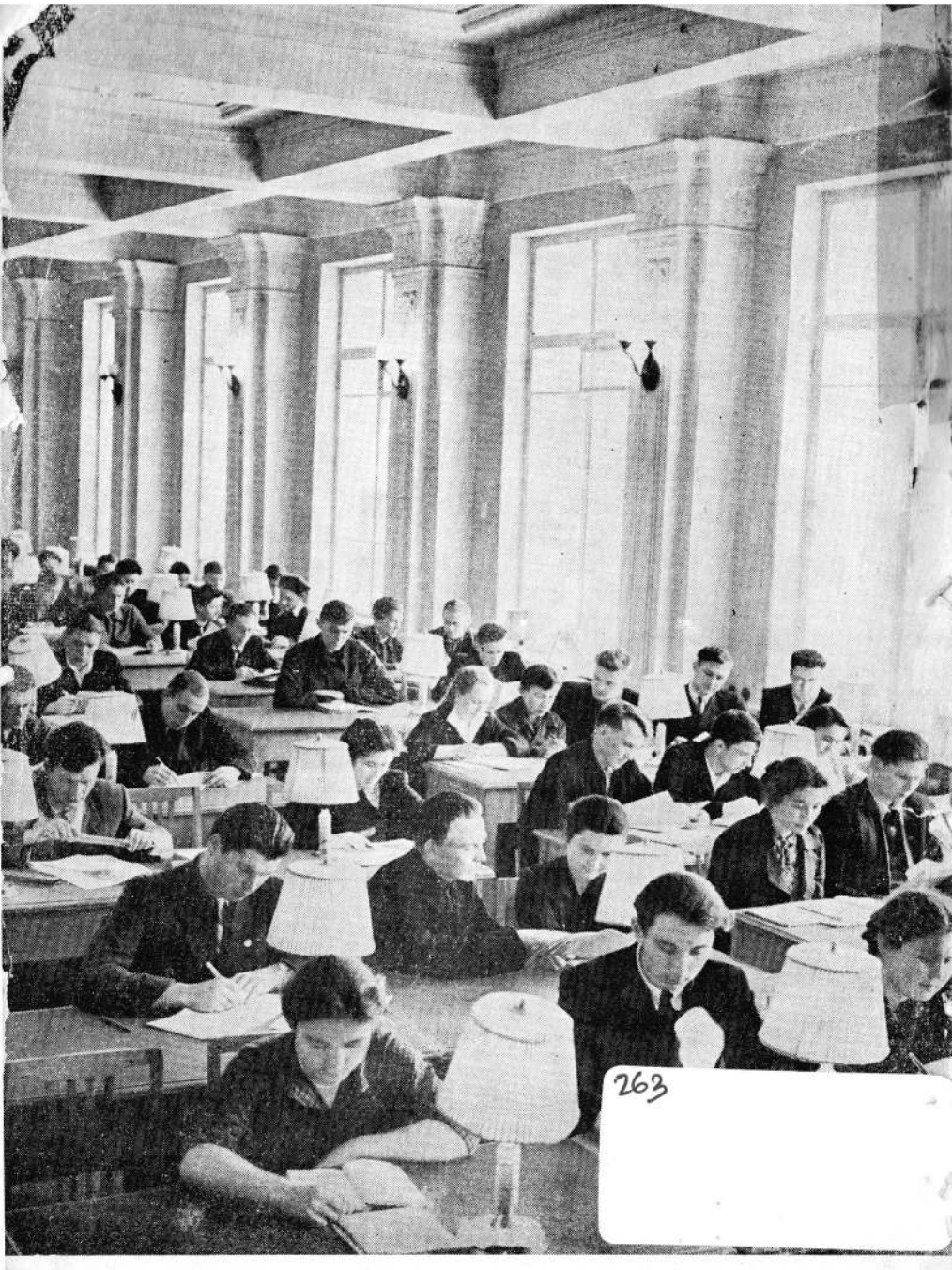

A Reading Room in the student library of the North Caucasian Mining